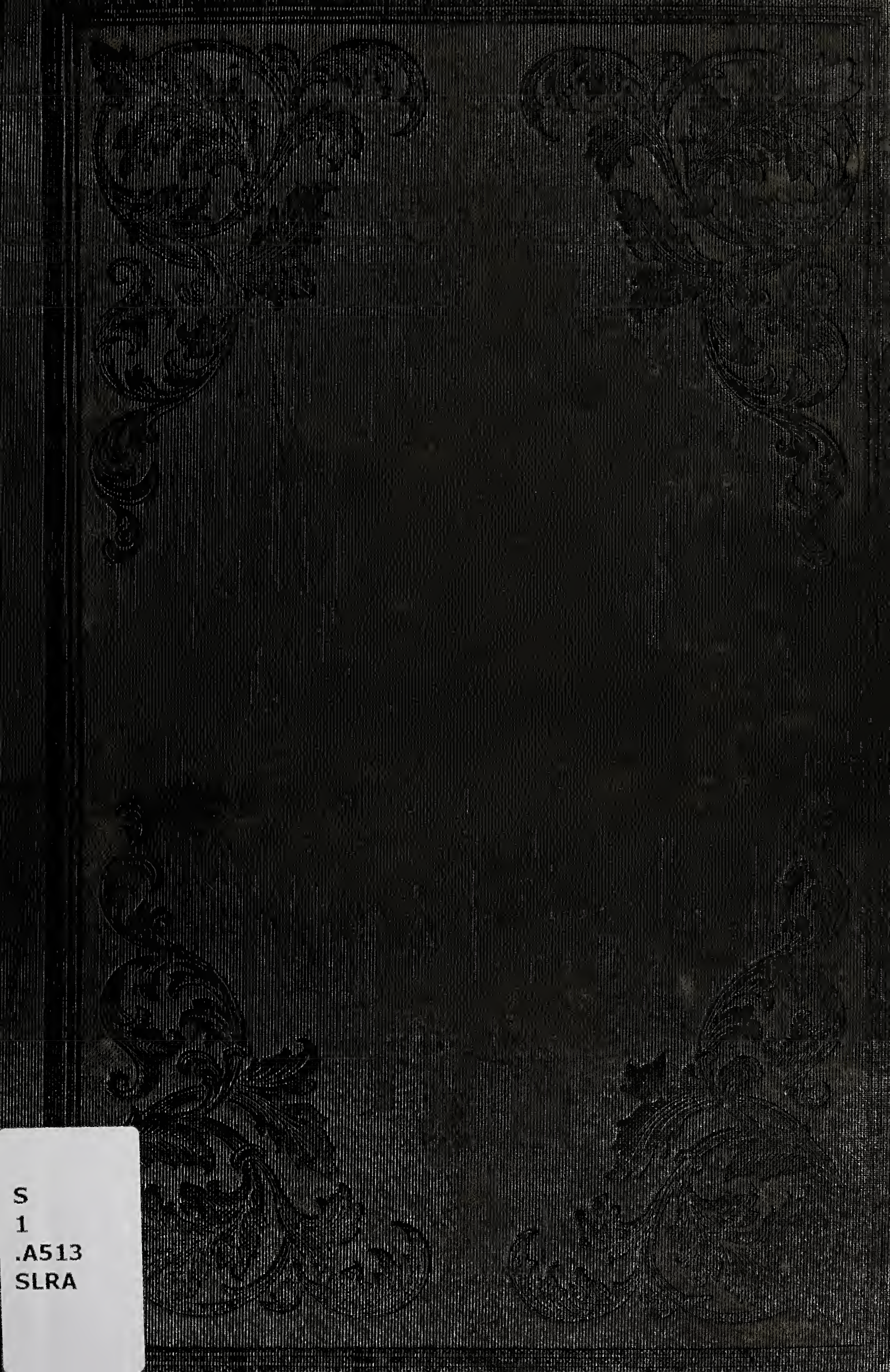
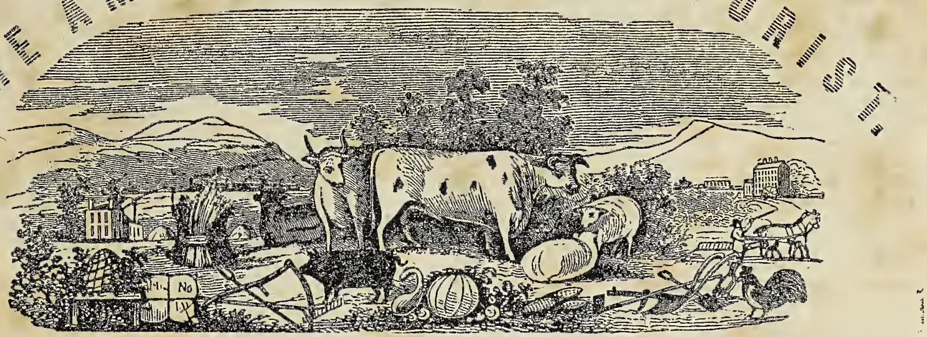


S
1
.A513
SLRA

SMITHSONIAN
NOV 27 1959
LIBRARY

630.573
Agr. + For. Prod.

THE AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of Man.—*Washington.*

Vol. 1. **New York, April, 1842.** **No. 1.**

A. B. Allen, and R. L. Allen, Editors. 36 Park Row. Geo. A. Peters, Publisher.

"THE AMERICAN AGRICULTURIST" will be pulished Monthly, each number to contain thirty two pages, royal octavo.

Terms.--One Dollar per annum payable strictly in advance.

Six Copies will be sent for $5, if remitted at one time, free of postage, in funds current in New York, or in the States where the Subscribers reside.

Twenty five Copies will be sent for $20, if remitted as above

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, No. 36, Park Row, New York.

"The American Agricultural Magazine."

A Work of the above title will be issued from this Office, as soon as a sufficient number of Subscribers shall have been obtained, to justify commencing the publication. It will consist of sixty-four pages monthly, of which the American Agriculturist will constitute a part, embellished with one or more fine engravings in each number, and in the selection from the most enlightened Foreign works, and a more enlarged discussion of matters pertaining to American Agriculture, than can be given in our present columns; it is intended to supply a place for the general Farmer, not afforded by any periodical now published.

Terms.--$3 per annum, payable in advance.

Six or more Copies subscribed for at one time, subject to the same rate of discount as above.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

Payment will in all cases be required in advance.

☞**Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

The Prospectus for the present work, on a somewhat different plan, was issued in December last, with the expectation that the first number would be published in January, but unavoidable circumstances have prevented either of the Editors from coming to this City to attend to its publication till the present time.

It will hereafter be punctually issued on the first of every month, and should it be ascertained to be the wish of our Subscribers, all the numbers constituting the first volume, may be issued before the last of December ensuing, so as to commence the second volume with the first of January, 1843.

It will be perceived by our terms above, that we intend publishing an enlarged Agricultural Journal, to be called "The American Agricultural Magazine." Such a work has been urgently demanded by the more advanced and scientific Farmer and Planter, and will contain most of the interesting matter to be found in Foreign works, adapted to American soil, climate, and production, with more extended and scientific discussion and illustration of farming stock and of home productions, than is suited to the general and popular taste.

As this will be attended with considerabe expense, we must wait the expression of public opinion for a short time, which we shall look for, accompanied with such *substantial* and *convincing arguments*, (viz. the remittance of their suscriptions,) as will enable us at once to commence the publication of a work so desirable to the Agriculturists throughout the country. Should the publication of this work be delayed for a considerable time, the subscriptions forwarded will be returned, or applied to the "American Agriculturist," at the option of the Subscribers.

TO OUR READERS.

In introducing ourselves to the public as the conductors of a new Agricultural Journal, we should do injustice to their good sense, not to confess frankly, a diffidence in entering upon a career, which is in the extent and weight of its obligations, new, arduous, and responsible.

It is but a few years since the first agricultural periodical issued from an American press, to flicker for a short period before the listless gaze of public apathy, and then expire for want of adequate support. In like manner several papers of conceded merit successively rose and sunk, until at last, from their unrequited efforts, the spirit of our people was aroused to the importance of agricultural information, and the public mind had become awake to a partial appreciation of the necessity of scientific enquiry as connected with the cultivation of our soil, and the general improvement of our farming system. In accordance with the public demand, several useful and well sustained papers have sprung into existence within the last few years, which from the intelligence they have imparted on agricultural subjects throughout the country, have added millions to our national wealth and prosperity.

We too, have come into this ample field as laborers. In doing so, we arrogate to ourselves no superiority of intellect, or higher sources of knowledge than are possessed by our contemporaries and fellow Journalists. We seek only to enlarge the boundaries of that high order of intelligence, which we know the pursuits of an enlightened system of husbandry require, and we trust we shall so demean ourselves in conducting our work as not only to merit the approbation of that public whom we address, but inculcate also, that respect for this noble profession which it so eminently deserves.

The pursuit of agriculture in its broadest sense, it need hardly be observed, constitutes the basis of our national virtue and national wealth. Yet important as it is in the accomplisment of these great objects, and in its truly elevated and dignified character, it has been, and still is, in its real merits, estimated below that of other professions in our land.

The pecuniary troubles, which, within the last few years, have so extensively visited our country, have been produced *almost exclusively* by the neglect of this indispensable basis, on which all other pursuits should rest; and the disastrous fate which other occupations have met, constituting as they have done, a too enlarged super-structure for our agricultural foundation, has taught the present generation, lessons of wisdom which they will not soon forget. We must now begin, once more, to build our social system, and make our *foundation sufficiently broad and strong*, and if our intemperate ambition and misguided enterprise induce us to enlarge the edifice beyond the extent of a perfectly adequate support, we must inevitably expect to see it "topple down headlong." There are principles and laws in the social system, as firm and unyielding as in the mechanical, and whenever they are disregarded, we must look for its partial derangement, or entire subversion. That shrewd observer of men and things, Baron Rothschild, foresaw with a noon-day clearness, the tedency of our system in the recent heyday of our fictitious prosperity, when he refused the tempting offer of an American loan at a large premium, for says the sagacious banker, "a nation that ought from its pursuits, to furnish a surplus of produce, can find money neither for principal or interest while it has to buy its bread in Europe."

We need to have the occupation of farming made more popular and attractive; it should occupy a higher niche in popular estimation and in the scale of national employments; it should command not only the cold respect and distant admiration of our active and enterprising business men, but their warmest regard and cordial participation. When this is the state of public opinion and our professional and mercantile and speculating pursuits, are disincumbered of their legions of supernumeraries, our mechanics and manufacturers sustained in their meritorious efforts to supply our country with her own fabrics; then may we expect that real and substantial return of prosperity, which we may otherwise look for in vain.

To aid in directing and stimulating the efforts of our enterprising and patriotic countrymen in consummating so desirable a result, our time and talents will be devoted, and we shall feel amply compensated if we shall succeed in contributing, even in a remote degree, to the accomplishment of an object so dear to every American heart.

We should be justly deemed neglectful of the unsolicited compliment paid by the intelligent gentlemen composing the board of agriculture in the American Institute of this city, to one of the editors of the Agriculturist on learning that he was about to establish such a work here, should we omit to give it publicity in our columns, and we can only say that our own exertions shall not be wanting to reedeem the pledge they have so liberally proffered.

At a meeting of the "Board of Agriculture" of 'THE AMERICAN INSTITUTE OF THE CITY OF NEW-YORK, held on the 27 day of December, 1841, a prospectus of "The American Agricultural Magizine," about to be established in this city, and conducted by Mr. A B. Allen, having been read and submitted to their consideration, it was

Resolved, That in the opinion of this Board, the establishment of a national Journal of Agriculture in the city of New-York, at this time, is demanded by the vast and growing interests of American husbandry and domestic economy in the United States. Believing that its location at the seat of our great agricultural fairs, where the highest sources of information on all subjects connected with this great interest are at hand, will be productive of eminent good, and possessing entire confidence in the ability of Mr. Allen to conduct the work in such manner as will promote our agricultural advancement, we cheerfully recommend it to the attention and support of our fellow citizens throughout the country.

JEREMIAH JOHNSON, *Chairman.*
NICHOLAS WYCKOFF, *Secretary.*

The following gentlemen compose the Board of Agriculture of the American Institute:

Jeremiah Johnson,
Charles Henry Hall,
Thomas Addis Emmet,
Francis Price,
Henry Whitney,
Nicholas Wyckoff,
Joseph Wood,
Samuel Bradhurst,
Gideon Freeborn,
Abraham Bell,
J. E. Cropsey.

THE FORM OF OUR SHEET differs from that of a large proportion of our American Agricultural papers, and it may perhaps be proper to give the reasons for this variation. They are simply these. It is a more compact and convenient form for reading as an unbound sheet, and as we intend to give a series of volumes that will not only afford matter for present entertainment, but contain such information as will justify being bound, and have their appropriate place hereafter in the library, as a work for future reference and perusal, we deem a form and size similar to that of the larger books found there, absolutely essential. We know no reason for giving a large quarto form to an Agricultural publication, that requires a separate niche for itself, or must be lying exposed on a table, or stowed away in some remote drawer. As we shall claim for it a place among kindred works of a well-selected library, we think the public have a right to demand of us a similar size and shape. The only objection that occurs to us, is the inconvenience of giving large plates; but this is perhaps totally removed, when we consider for all general purposes, a portrait of any animal of the size of one of our pages is sufficiently large, and a plan of a farm, buildings, &c., can be given on a map if required, that can be folded without injury.

OUR LOCATION being in the heart of a Commercial Metropolis, may cause some apprehension of a want of that entire devotion to Agricultural matters, which must characterize a Journal that is expected will be in the highest degree beneficial to the Farming community. In answer to any such well suggested objection, we would say, that we have maturely weighed the pros and cons of our position, and it was not till after the fullest deliberation, and the opinion of many of our friends whose judgment we would rather confide in than our own in this matter, that we have decided to take our stand here. We have in this great Commercial emporium, access to information and means for procuring as well as distributing it, that cannot be found elsewhere. More Farmers and Planters resort here than to any other city of the Union, and the facility of procuring back numbers and volumes, as well as those just issued, without the expense of postage, is no inconsiderable item. And our own opportunities for looking over crops and herds, and visiting our subscribers is greater than it would be in any other place. And to those who know us, we need not assure them, that though we are personally in the city, *our hearts are in the country* as well as our interests. We shall not prove recreant to our trust.

Our Office is in a central position, No. 36 Park Row, opposite the City Hall, where we shall be happy to see and converse with any friend to the great object whose interests we are advocating; and those who cannot come personally, we shall be glad to hear from by letter, detailing their experiments in crops and animals, furnishing such other information as may be interesting and relevant to our subject, or making suggestions and inquiries. We shall be happy to receive and acknowlege any specimens of rare seeds for the purpose of distributing among such as will make the most beneficial use of them for the public.

Our object is to make a work suited to every latitude and longitude of America, and for this purpose we shall give occasional essays on productions wholly or almost exclusively confined to the West and South, as Cotton, Sugar, Rice, Tobacco, Hemp, Indigo, Cochineal, Coffee, (Tea, if it can be raised,) Oranges, and Tropical Fruits. These, while occupying but a comparatively small space in our Journal, may afford our Southern subscribers what is difficult for them to obtain, yet essential to their prosperity; and at the same time, furnish our Northern readers with a useful and pleasant variety.

To enable us to do this in the most acceptable manner, we shall feel under great obligations to our Southern correspondents, if they will furnish us facts and details, the most minute and comprehensive, on all subjects connected with their peculiar products.

Our Northern friends will of course, greet us fully with all the information which may add to the general stock of knowledge. We design making our work a *thoroughly practical one*, and for this purpose we want facts on which to base every thing. We do not wish to amuse or occupy the valuable time of our readers with fine spun, unsubstantial theories, to befog and mislead them, when their minds require to be kept in the straight forward practical path of utility.

And for their own benefit, and without reference to any consideration beyond their own interest, we would here make a most important suggestion to them, and without a strict adherence to it under all circumstances, they cannot hope to make that progress in their pursuits that is perfectly within their reach. It is to observe accurately, and note carefully for future use and comparison, every circumstance connected with their seeds, crops, lands, animals, &c., &c. We have not time at the present moment to pursue this subject, but shall take an early opportunity hereafter to give our views in full upon it.

A word to our Correspondents. For the purpose of making every communication which may appear in our Journal as useful as possible to our readers, we would suggest a careful attention to the following particulars.

1°, In giving the weight of Animals, state their age; 2°, breed; 3°, quality of carcass if dead, or appearance and shape if alive; 4°, manner of feeding and treatment, mentioning especially any deviation from the ordinary course pursued in rearing or fattening them.

If Crops, specify 1°, the exact kind or variety; 2°, where the seed was obtained, and of whom; 3°, kind of soil; 4°, mode of culture, including a statement of the previous condition of the ground, kind and quantities of manure added, &c.

Our purpose is not to amuse so much as to interest, and to publish to our readers that such a person has raised an Ox, weighing 4000lbs. a Hog, 1500, or a Sheep, 200, or had sheared 16lbs of clean Wool, is to inform them simply of a monstrosity; but if we tell them at the same time, where they can procure such breeds, and how they may attain such weights, we place information in their hands, that will enable them to derive a practical benefit from the communication.

Selections in Seed, cannot too carefully be made by the farmer. There is freqently a difference in yield in a crop from one kind of seed, of one hundred per cent, over another from the same quality of land, and similar treatment. Every species of grain, roots, and grasses is subject to this difference of yield, without apparent cause.

Perhaps the best illustration of this principle is afforded in the Baden and Dutton Corn, which having been carefully cultivated for a series of years, and the most prolific and perfect ears annually selected for seed, have at last acquired a distinct character as most abundant yielders. We believe every kind of plant is susceptible of this improvement, and from the careful farmer we solicit a close observance of the following rules. 1°, Whenever good seed is to be obtained, procure it at any reasonable expense—*always get the best*; but by this, we do not mean the most costly, or even the fairest in appearance; but from such a stock as has been found to give large crops. And it is always important to have in view the selection from soils *inferior* in quality, or at least *not superior* to that on which you purpose planting. 2°, Whether you commence with choice or improved seed or not, in making selections from your own crops, carefully choose such portions of it as has produced the best and most perfect seed. If corn, take from the stalk which has the greatest number of ears, and those the largest and best filled. Seed corn procured from a more Northern latitude than that in which it is to be planted, is always to be preferred, as it will ripen earlier than more Southern seed. If wheat, barley, or rye, select such roots as send out the greatest number of stalks, and those furnishing the longest, best filled, and heaviest heads. If roots take such as are large, solid, and nutritious; not spongy or hollow, or strong, or unpleasant to the taste, not made up of coarse, woody fibre, or watery; and with smooth well-shaped surface. A selection is again to be made from the seeds of beets, carrots, turnips, &c., and these should be taken from the branches nearest the roots, and always the largest, fullest seeds should be preferred.

In selecting from pumpkins, and squashes, melons and other vines, always choose from perfect fruit, *as near the root as possible.* Such seed bears much fuller with less vines, than if taken nearer the ends, *and ripens very much earlier.*

Another rule to be observed, so far as is practicable, is a change of seed as often and from as great distance as possible. This practice added to the foregoing, has resulted in giving us some of the most noted and popular seeds. The Rohan potatoe, the Italian and Siberian wheat, and others, are doubtless indebted to these causes for all their popularity. When it is not convenient to procure seeds from a distance, an exchange with one's neighbours or from one lot to another on the same farm, and especially from one kind of soil to another will do better than no change at all. Caution should always be observed not to suffer the flowers of such plants as are designed for seed, to be near enough to others of the same species to allow of the mixing of the pollen or farina of different families; as for instance, the white and orange carrot; the pink eye and blue nose potatoe; the early sioux and sweet corn, or any other, as the effect is to give a blended or mongrel character to the products. This last practice, has become, in the hands of scientific, close observers, a prolific source of new and valuable varieties.

A constant and rigid observance of the foregoing rules, we are confident would be the means of largely increasing the crops of the country, and we cannot too earnestly enforce them on the attention of farmers. We shall resume this subject hereafter; and in the mean time we shall be pleased to have our friends communicate to us personally or by letter, the result of their experience in any way connected with the foregoing.

NATIONAL AGRICULTURAL SOCIETY. We have perused with much pleasure the address of Hon. J. M. Garnett, President of the above Society, delivered in Washington, in Decr. last. We are glad to see this veteran in Agriculture at the head of this society. He is a thoroughly practical as well as theoretical farmer, and just the man for that post. His address is of the true national stamp of '76, and asserts most fully the true dignity and importance of Agriculture, and its great relative value in the scale of American employments. He fully asserts its just claims for acquirement, skill, and science, and the necessity of training our best talents for it, instead of crowding the professions with our young men.

The great influence a National Society will exert in binding our union in still closer and more effectual bonds, is strongly urged. The great utility of establishing agricultural schools, closes this truly patriotic address. We hope this is but the begining of good things in Washington on this subject.

We are highly gratified in looking over the importation of sheep and cattle, made by Messrs. Corning and Sotham, of Albany, a few days since, in the packet ship Hendrick Hudson, from London. But we regret to add that owing to the severe and almost unexampled gales, the ship encountered, the two choicest cattle, the Hereford bull, 'Major,' and the short horn cow, 'Cleopatra', died on the passage. They were both said to have been as good animals as England can produce. One short horn cow, 'Venus,' is a magnificent animal, and the bull calf 'Columbus,' a splendid fellow *of his days.* These are the only surviving cattle. They have also a few Leicesters, and thirty three splendid Cotswold ewes, that will be hailed by the long wool and large mutton advocates, with unaffected delight. About one fourth of the flock were lost on the passage.

We hope our farmers will soon be enabled to furnish the tables of our bon vivants, with *English mutton*, and not force them to send to England for it at the rate of 25 cents per lb., as was recently paid in the Boston market. It is from the long wools and South Downs the large mutton is made, which frequently commands such extravagant prices.

To the breeders of domestic stock in the United States. — As our great object is to discuss all questions relating to agricultural improvement in the spirit of candor and fairness, and to elicit such truths as will in practice attain the greatest utility; and knowing full well that in a country so extensive and diverse in its climates and soils as ours, various breeds of domestic stock are required for the different purposes and locations of the farmer, we invite the advocates of all the different varieties, to a full discussion of their several merits, in our paper.

Each party shall have a fair hearing, and every animal advocated, a candid judgment awarded them. We are the advocates of no one favorite race, as suited to all localities. We believe each is suited to some one peculiar position, and having conceded this in its broadest and most liberal sense, we shall be happy to treat all correspondents with the consideration due to their communications, in which they may discuss the merits of their different breeds. But we would most earnestly beg of them to give us the plain *unimbellished facts* on which they base their preferences, and establish the peculiar merits of their favorites. ***Facts*** are the main things to rely on; indeed, where experience is to be the guide, the only data we can or ought to base an opinion upon. All personal allusions we desire may be carefully avoided, as they tend neither to the dissemination of knowledge, or the attainment of that utility which we especially desire should be the result of the deliberations we offer to the public.

Free discussion in agriculture, as in politics, is the great highway to truth, and we invite it to its fullest extent; always reserving to ourselves, however, the privilege of judging the limit to which discussion may beneficially proceed, and making such notes or observations on whatever is written, as a due respect for the writer, and a regard to the true interests of the subject, may require.

With these remarks, we cordially invite the reflections of the stock breeders, graziers, and dairymen of the country, to our columns.

☞Subscribers are particularly requested to write their Names, Post-office, County, and State in full, that there may be no mistake in the direction of their papers. They must also recollect orders must *invariably* be accompanied with the money, as the extremely low price at which we furnish the paper, will not allow of our sending it on credit in any instance.

The Ever-bearing Raspberry.

We have often remarked, that there are many indigenous productions existing in the varied soil and climate of the United States, that if brought to light and improved by cultivation, would not only add greatly to the comfort but to the wealth of society also; and we hope through the work just commenced, to be enabled to contribute our mite in assisting to bring them before the public; and to enable us to do so most effectually we would recommend to our correspondents' frequent trials, and systematic perseverance in the selection and cultivation of all plants in the least degree promising. Are there not trees, shrubs, grasses, plants, vegetables, and fruits, now existing unheeded, that show as fairly in their humble originals, as did the potatoe, when first discovered. How largely this single root now contributes to man's sustenance, we need not say. The population of Ireland receives probably one half its food in this highly improved and most excellent farinacious root.

In illustration of this remark, we introduce the letter of Mr. Carpenter below, thanking him heartily for the information it contains. It will be proper however, for us to add that all with whom we have conversed, do not agree with our respected correspondent in his remarks as to its flavor, but this may be owing to an unfitness in the season, or climate where it was produced. We know that the wild northern Raspberry is superior in juciness and flavor to that of the more southern regions; and from all that we can learn, the "Ever-bearing" would probably improve greatly by an introduction to more northern latitudes; and as it is very hardy, and rapidly and easily propagated, we recommend the lovers of good fruit to give it a trial. Now that a conservatory and green house are considered as necessary appendages to a gentlemans residence, why might it not be there introduced, and give him delicious fruit throughout the winter?

Mr. Ernst can supply it in any reasonable quantity from his fine nursery grounds at Cincinnati; and we presume it may be had in this vicinity, as cuttings have been repeatedly sent on here, through the well known liberality of Mr. Longworth; and we shall be happy if cultivated with success, to give the public information in our columns where it can be had east of the Alleganies.

Cincinnati, Jan. 1, 1842.

A. B. Allen, Esq.

Dear Sir,—The Ohio Ever-bearing Raspberry, was first discovered some fifteen years ago, in the northern part of this State, near Lake Erie, but in what particular part I am unable to say. Mr. Longworth of this city introduced it into his garden in 1832. It has been little known here, however, until within the last two years, but there is now great effort made by our gardeners to cultivate it for this market. The fruit resembles the wild native black raspberry but is much larger, more fleshy, and of a much finer flavor, and is also a very profuse bearer.

In this climate, the wood of the previous year's growth bears one crop in June, after which it soon dies, the young shoots then come into bearing, and continue doing so into October, till the frost cuts them off, when you will see buds and blossoms, and the fruit in every stage from green up to full ripe on the bush, stayed by the hoary hand of nature in the midst of their productiveness. The fruit is preferred by many to the red Antwerp, and with its large erect clusters of flowers, presents a beautiful appearance.

To propagate it, in the month of September you turn the ends of the young shoots to the ground, and slightly cover them over, and they will immediately take root. The best shoots for this purpose are those that have not borne fruit, or are about to flower. In the spring you cut these shoots off within a foot or two of the ground, and they can then be transplanted, and will shoot forward with great rapidity, growing of course from the butt end up. They will also propagate themselves in this way, the shoots rising up three feet or more, and then gracefully bending over like the branches of a weeping willow, till they reach the ground; their prongs at the end, then easily insert themselves when it is soft and open, and find root, but as covering them slightly is only the work of a moment, this is considered safest and best, and ensures a selection of the choicest shoots to propagate from. They will also grow from the seed sown in September.

Respectfully yours,
Ezra Carpenter.

Cheap food and plenty of it for the starving poor of Europe.—While at the West, we noted the following prices at the Pork Packing Houses:—Pigs heads, neatly dressed, with large fat jowles, and weighing on he average at least sixteen pounds per head, 8 cents each, which is about one farthing sterling per pound. The best of spareribs at the same price. Sausage meat cut from the backs and bellies of the nicely dressed animals, one halfpenny sterling per pound; and pigs feet, that make the best of souse, in any quantity, for the *trouble of taking them away;* and the trimmings of lard, and the heart and liver, as poor people here will not eat them, the proprietors of slaughter houses are obliged to hire carted from their premises, to be thrown away!

To prevent depredations by Hawks.—One or more Guinea hens in a flock of fowls it is said will effectually prevent molestation from hawks.

☞ In answer to several inquiries on the subject, we reply, that the senior editor of this paper, A. B. Allen, will be in this city after the 16th of May next, and will then attend to executing any orders for the purchase of farming stock, implements of husbandry, roots, seeds, fruit trees, books, engravings, &c., at a moderate commission. His long acquaintance with these matters, will ensure a good selection, if made personally in this country, and his correspondents abroad, will enable him to execute orders in Europe through agents there, for any of the above. The constant intercourse enjoyed in this city, through its packets and otherwise, not only with every portion of the United States, but with every part of Europe also, afford great facilities for filling immediately, any orders that may be sent. They must, however, *be invariably accompanied by the money.* Until the time above mentioned, he may be addressed at Cincinnati, Ohio.

To guard Sheep from being killed by Dogs.

Perhaps one of the greatest obstacles to the keeping of sheep, has been the savage destruction made among them by worthless curs kept throughout our country, for no other reason that we could ever imagine, than to gratify the fancy of their owners. If these animals were kept constantly chained up where they could do no harm, no fault would be found; but when suffered to run at large and become public destroyers, it is quite another affair, and we hold every one justifiable, nay, a positive duty on their parts, to shoot all dog prowlers, without any more hesitation than they would a mad wolf.

The importation of the large Spanish shepherd dog has been recommended, as he will invariably attack and kill any dog that approaches his flock, but this would be an expensive and troublesome measure, and it would take a long while to breed a sufficient number of them here, before they could become generally effectual. During our recent visit to Kentucky, we learned a very simple, and at the same time profitable way of guarding sheep, which is this:—

Put a few active cows, with their sucking calves, in the same pasture with the flock—five would probably be enough for several hundred sheep, to which add five active three year old steers, and as many more two year olds. Take a gentle dog into the field, with a long light cord about his neck, the end held in the persons hand accompanying, to keep him in check, and then set him on to the sheep. The cows, thinking of their offspring, will immediately advance to head the dog and guard the calves, the steers will follow their example, and the sheep retreat behind them. Thus continue a few times, till the steers are well broke in, when the cows can be taken away, and they will inevitably gore any dog to death that dare persist in attacking the flock. However brave a dog may be in other matters, the moment he attacks sheep, he seems to be conscious of the ignominy of it, and as if conscience stricken, becomes a coward, and will run at the slightest approach from other animals.

When steers arrive at the age of four years, it is generally requisite to remove them to better pasture than is required for sheep, for the purpose of fatting, or they are wanted for the yoke. But just before this is done, add as many two year olds as you wish to remove of the older ones, and the three year olds left, will soon break in the young ones, and so the system can be annually kept up as long as requisite.

For these guards, we would recommend a small active race of animals, with sharp horns, as they would more effectually gore and toss a dog, and it will require a small active animal to support itself on feed, that is generally as short as sheep pastures usually are. The hardy red cattle of New England would be admirable for this purpose, or indeed any active native animals, those chosen from the hill or mountainous districts would be best, as more fleet and pugnacious when required. We are told by hunters, that it is thus the wild buffalo protects himself, on the vast plains of the West, from the attacks of savage bands of wolves, and they not unfrequently afford protection to whole herds of deer. Mr. Hart of Kentucky defended the deer in his park by the elk, a single pair of which, would be sufficient to guard hundreds of them, as they would run down the fiercest dog in a few minutes, and cut him in two by perhaps a single stroke of the sharp hoofs of their fore feet.

Geology applied to Agriculture.

Among the subjects claiming the attention of farmers, after an intimate knowledge of the direct process of planting and securing their crops, and the proper application of the ordinary manures, and the raising and maturing of their farm stock, we would place a general and familiar knowledge of Geology. And the reason of it is perfectly obvious. In its general character it embraces, not only the solid structure of our globe, its vast and almost illimitable ranges of rocks, the sterile mountains and barren deserts, but it comes home to every farmers own business. Every portion of the soil he cultivates, the materials of his manures, and all the constituent portions of his vegetable products —yes, and of his animals also, in other combinations, are the legitimate subject of the Geologist. A knowledge of these materials, and their combinations, their existence in the various soils that may be subject to his cultivation, the character of the stimulants and manures, (other than animal and vegetable,) such as lime, peat, marl, gypsum, &c., necessary to enable him to afford the greatest crops; all these are not merely instructing to the man of science, but are directly and highly beneficial to the practical husbandman.

In the furtherance of a taste for geological information and the means of affording it, to say nothing of the great and important discoveries of mines and quarries and salt springs; and beds of gypsum, marl, peat, and coal; we conceive the State Geological Surveys have done more for the benefit of the farming interest, than the expenditure of the same amount of money in any other way whatever. In corroboration of the practical bearing of this subject, we subjoin some observations from one who is high authority in this department of science.

EXTRACT FROM PROFESSOR JOHNSON'S LECTURE ON GEOLOGY AS APPLIED TO AGRICULTURE.

"From the detritus of certain rocks, we find clay, lime, and sand mixed, constituting a soil best fitted for growing crops. The soil performs various functions in regard to vegetation, one very important one to which I will allude. If you burn a tree, a certain portion of ash is obtained, or take any vegetable matter whatever and burn it, a certain quantity of ash is left containing various substances—potash. soda, and silicious matter. These substances are all derived from the soil. Now, observe if a plant contains lime, it cannot grow upon sand; if potash, it cannot grow upon lime; thus a fertile soil must contain soda and potash. and, among other important substances, also phosphate of lime. Geology tells us in what rocks the soda, and potash, and phosphate of lime exist; and it tells us what we are to add in any case, or which of all these ingredients are requisite to form a soil. In the common farm yard manure you add all the ingredients required, potash, soda, and lime. All vegetable substances contain a certain quantity of phosphate of lime; now, all animals are fed upon grass, and their bones contain a certain quantity of phosphate of lime, and this must be derived from the soil. Geologists have found animals of a former age embedded in the solid rock. Bones have been found in large quantities; and if you suppose one clay rock contained a large quantity of the bones of these animals, you are enabled to conclude that the earth of bones will not be wanting in the soil that is formed from it. Without them, animals can neither be nourished nor grow. And here we have reason shown why some soils that are apparently as good as others, should not be capable of producing good herbage equally capable of fattening cattle, and increasing their size, with rocks, which, among other substances, contain the phosphate in sufficient abundance. In some remote period of time all rocks that occur in masses have been melted and thrown up in their present state; they are in fact *lava*, and their capability of being melted, arises chiefly from their containing potash and soda. Certain plants cannot grow without potash and soda; and hence it is that the soils formed by the crumbling down of these rocks, are more fertile than others. The water trickling down, carries the soda and potash along with it, and thus enable soils to sustain vegetation, which it otherwise would not have been able to do. Certain sand stones, the red, for instance, are full of the particles of these unstratafied rocks. Great layers of shining little particles are discovered, which are known by the name of *mica*, which renders it susceptible of very remarkable applications. In some cases it occurs in the form of a rock in thin layers, and when this mass is taken out and exposed to the air, it crumbles into fine powder, and is full of these particles. Chemists have shewn this mica contains a considerable quantity of potash, and when applied to grass lands, it forms a most important top dressing, increasing the growth of the grass. In Zealand and Sweden, the Beech tree grows luxuriantly, and this is attributed to the mica in the soil. The most natural application to land is the farm yard manure, but when this cannot be obtained, some other manure must be had recourse to. In some regions destitute of lime and requiring manure, where there is nothing but slate, granite, and some magnesia rocks available, I have recommended crushing the granite to a powder and applying it in a finely comminuted state as a top dressing, believing it will prove a beneficial application, as containing so many of these substances which the land requires before it can grow vegetables."

The constituent principles of these intractable, and so far as vegetation is concerned, apparently useless appendages to a soil, the rocks that surround, and the loose stones that sometimes abound in it, have been found on analysis by chemists, to afford several of the constituent principles of vegetation, without which, hey can live but a short time, and can never afford the full and matured fruits which are the objects of their cultivation. The whole mass of soils, and the loose earth, and drifting sands, that constitute so large a portion of the surface of our globe, is very properly supposed by geologists to have once constituted solid rock, but which the various causes heretofore and now operating, have converted into their present condition. But of these changes it is not our purpose now to speak, our intention being simply to reiterate and further illustrate the fact above stated by Prof. Johnson, that many of them abound in those principles, essential to the fertility of soils. It is found for instance, that the mica above mentioned, which is an important fossil from its very extensive distribution as an ingredient in granite, mica slate, and other aggregate rocks; consists of silex, 46·3; alumina, 36·8; oxide of iron, 4·5; potash 9·2; fluoric acid, 1·8. Here we have nearly one-tenth of the entire mass pure potash, one of the most stimulating and valuable manures, and of the silex and alumina nearly one half is pure oxygen, a large and essential ingredient of every vegetable. This, however, is yielded up only under peculiar circumstances. Pinite, considerably diffused, is nearly identical with mica, wanting only its fluoric acid.

Feldspar, another fossil extensively pervading the globe, being next to quartz and oxide of iron, the most abundant of minerals, and constituting a large portion of Granite, is composed of silex, 66; alumina, 17; potash, 12; with the addition of a little lime and iron.

Some varieties of clay slate or argillaceous slate afford potash, and nearly all the clays afford some lime.

Jade or Nepheitic stone contains about *eight per cent of potash.*

Elaolite or Fettstein has *sixteen to eighteen per cent of potash.*

Lazulite or Lapis Lazuli, the beautiful azure stone used for Mosaic work, the powder of which affords the paint known as ultramarine, exceeding all other pigments in beauty and durability, according to one analysis, affords carbonate of lime, (common limestone,) and sulphate of lime, (Plaster of Paris.)

Haune, another beautiful mineral, of a sky blue color, affords fifteen per cent of potash.

Leucite affords twenty-one per cent of potash.

Soda, so essential to productive soils, exists in many of the minerals.

The almost universal dissemination of common limestone, and the extensive, though less generally diffused sulphate of lime, or gypsum, is well known, which, by their almost imperceptible decomposition, afford stimulus and nutrition to the growing vegetation.

Thus it will be seen that Geology, but a few years since considered as an abstruse science, or at least as in no degree connected with agriculture, is by subsequent developments, shown to have a direct and intimate connection with it. The experience of every farmer, shows him the great benefit derived from the application of ashes as a manure; and these are but the *earthy parts* of the plants which have been derived in the last instance from the soils but remotely from the rocks. They are principles as essential to the sustenance of plants, and constituting as necessary portions of them, as the carbon, oxygen and hydrogen, which furnish the nutrition to animals consuming them. Thus, Prof. Johnson, in his Chemical Agriculture, has shown that the ashes of the following articles, after being dried at a temperature of 230° Fahrenhite, being a heat above that of boiling water, constituted of oats, 4 per cent; clover seed, 3; peas, 3; wheat, 2½; potatoes, 15; hay, 10 per cent.

The above are some of the facts essential to the scientific farmer, which under certain circumstances may have an important bearing on his practical operations.

Illumination in the West.—Already, from the aid chemistry has afforded to agriculture, has the West begun to turn their productions into new and more profitable forms than have been heretofore given them. Tallow and lard are subjected to a great pressure, by which the fat is separated into two principles, one a pure oil liquid at all times and equal to "winter strained;" and another, a compact firm matter, analogous to, and said to be equal to spermaceti. Oil is also furnished of the finest quality from corn; and from castor oil, abundantly produced there, "the best sperm candles" are manufactured.

TO OUR READERS.

In communicating as we shall often do to our readers, narrative memoranda in the form of tours, journeys, &c., connected with instructive remarks and observations on whatever Agricultural subjects and its kindred associations come under our eye, we have thought it a pleasanter method of diversifying our information, and thus occasionally make it more agreeable than in the graver and possibly duller style of the mere essay. In all such papers however, we shall confine ourselves closely to Agricultural subjects, and incidents connected with them; hoping by these means to give as great interest to our work as in any other manner.

Agricultural Tour in England. No. I.

LONDON, RAIL-ROAD, COUNTRY SCENERY, ENGLISH FARMERS, BIRMINGHAM, MANCHESTER, LIVERPOOL, MEETING OF THE ROYAL AGRICULTURAL SOCIETY.

It was on the morning of the 18th of July, that we found ourselves at the magnificent Rail-road depot, fronting with its noble pillared portico on Drummond-street, and taking our tickets, were soon snugly ensconced in comfortable seats in the cars. Punctual to the hour, nine o'clock, the coach doors were locked, the signal was given, and away we sped. As this letter will be sufficiently long without it, we shall, in some future number, describe the solid Rail-roads of England, and their superb appurtenances; suffice it to say now, therefore, that our pace the whole way was nearly that of the flight of a strong bird, averaging full twenty five miles the hour. The air was damp and chill, but flushed with excitement and the novelty of the scene before us, and wrapped up in thick Macintoshes, we heeded it not, but at once set ourselves with even more than a stranger's privilege, to staring on every side with all our might.

Regent's Canal and Park were soon passed, and as we neared Primrose hill, casting a lingeringing look behind, the mighty city of London appeared but a huge mass of buildings at the west end, shrouded beyond in a dim impenetrable cloud of mist and smoke. We had scarcely made this observation, when the shrill unearthly shriek of the engineer's whistle thrilled in our ears, as the advance warning of our coming, and into a cold, damp, dark, caverned tunnel, of about three-fourths of a mile in length, the engine dashed with its fiery lightening mouth, followed by a long train of cars with a loud reverberating noise like continued rolling thunder. What an entrance thought we, to grim old Pluto's dark domain.

But from this we soon emerged, and then came a country of gentle hill and dale, the rural beauty of which, must be seen to be appreciated. Though the Rail-road was comparatively of recent construction, nearly all newness was obliterated. In the deep cuts, unless through ledges of rock, the banks were obliquely graded and overlaid with sod of the deepest verdure, and along the edges of the road were stone faced ditches for the water to run off, the embankments again were neatly sloped from the iron rails, and planted with a variety of deciduous and evergreen trees of a dwarfish growth, while all along the line rose the thick hedge, now nicely trimed and plashed, and anon left to flourish in all its natural beauty and wildness. Hedges and ditches also divided the different fields that we were continually passing, some of hawthorn, gorse, or holly alone, others with rows of trees interspersed, and together with now and then a park, and thick plantings of some rugged, and otherwise barren hill side, greatly relieved the aspect of the country from anything like the monotony of a too general cultivation.

The cottages, farm houses, barns, and outbuildings were of brick or stone, generally old and antiquated in appearance, but at the same time neat and substantial, with thatched and tiled roofs, now and then one of a more modern erection of slate, and all with a soft grass plot, or garden around, kept in the nicest manner and the ivy, the honeysuckle, or rose tree, trimmed up the walls, giving beauty and loveliness even to the humblest peasant's tenement. We saw little of the towns and villages, saving their red tiled roofs, as we usually passed them at a distance, or only on their outskirts, but at the various stations on the road, others of a plain modern architecture are fast springing up, all substantial, and as soon as completed, if a foot of ground will admit of it, enshrouded in shrubbery. The old embattled church peeping out from embowered trees, with its square grey tower, gothic minarets, or pointed steeple was not wanting in the landscape, while frequently rose to view the massive aristocratic hall or castle, with their extended parks or preserves, dotted with deer, and filled with wild game.

It was in the midst of hay harvest, and scores of women and girls neatly clad, and with wide bonnets, were following the mowers, spreading the grass, or raking up such as was sufficiently dry to be stacked. The grain crops waved thickly and abundant, the earliest of which were just begining to ripen, potatoes were mostly in flower, some of the turnips had been once hoed, others again were peeping from the ground, while later fields were ploughing and manuring still to be sown. A few horses were out grazing, but large flocks of sheep and herds of cattle were most abundant. Nearer London the South-downs were most abundant, but further on, and especially as the lands grew heavier and stronger, the Leicester predominated. The horned beasts were various, embracing as with us all sorts and colors, but among the more particular graziers, high crosses of the Durham, the pure Hereford, and Devon and Scotch black cattle were prefered.

At the different stations, we were constantly taking up stout ruddy faced farmers, in neat drab gaiters or white top boots, all bound for the Liverpool show. Their conversation was about their own affairs, cattle, crops, weather, corn-laws, and politics, and on this subject we found them nearly all Tories. As the track is double, to add a little more variety to the scene, we met long trains of passenger coaches bound up, shooting by us like a rocket, and in the rear, open cars filled with sheep, pigs, and poultry, and covered cars of all sorts of merchandise for the London market. Thus passed four hours or a little more, when Birmingham, a full hundred miles from London, hove in sight, filled with its numerous manufacturing chimneys, rising like so many shot towers from eighty to perhaps one hundred and seventy feet high, and belching forth huge columns of smoke, completely enveloping the town.

After dispatching a hasty meal, we determined to make use of our brief stay here, in seeing what we could of the great *Brummagem* button manufactory, but we had proceeded only a short distance up one of the principal streets, when the high wind saluted us with such a volume of dust, gas, and coal smoke, that we were literally choked, and had to wheel round and gasp for breath. This we found would never do, so calling a cab, the driver of which, respectfully touching his hat, professing to be up to all the *lions* of the place, "could show the gem'en the town 'all, where vos the most hextror'ny horgan in the vurld, as halso the Woxall, as halso." He was going on to repeat with great volubility, when we cut him short by saying, that he might let us see first, and then talk afterwards.

To one who for the last fortnight had been rambling in her paradises of parks, and the spacious and magnificent streets of the west-end of London, Birmingham would appear but a tame place indeed; its buildings, however, are mostly good and substantial, and some of the public edifices and churches worthy of commendation. Of these last, Trinity Chapel in the pointed style pleased us most; we also admired the Free Grammar School, which was built at an expense of 40,000*l*. The Town Hall is erected after the manner of a Roman Temple. It rises from a lofty basement, and is adorned with fluted columns, being two hundred and sixty six feet by one hundred and four, and eighty three high, two-thirds or more of these dimensions within, constitutes a noble saloon, where the great National musical festivals are held. The organ is one of the largest in Europe, and certainly a meeting here by the musical elite of the world, must be something worth attending. Missionary and other public meetings are also held here, and we think the room admirably adapted to the purposes for which it was formed. From thence we proceeded to some of the show rooms of the great manufacturers, the displays of which were rich and varied, and glad enough were we, that no ladies were of our party to admire with us, or our purses might have been lightened rather more than a sober afterthought would have found satisfactory. The model in bronze of the famous Warwick vase is wonderful, the original being a *chef d'ouvre* of Grecian art, it holds one hundred and sixty three gallons.

"Now Cabman, you have shewn us the best of the town, we have heard much of the misery of manufacturing places, pray let us next see the worst."

"The gem'en bees from Lun'un?"

"Yes."

"Then, said he, with a crack of his whip, and knowing nod of his head, "weze beat St. Giles and Vapping,* and gives um twenty."

We thought if he could, he must be a genius so mounting below and he aloft away we whirled. We soon plunged into narrow filthy lanes, where every other tenement was a grogery, and certainly such squalid misery as we there saw, we think London would find it difficult to match, and we emerged from it overcome, faint, and heart sick at the disgusting wretchedness that we there beheld, and yet we believe that *intemperance* was the main cause of all.

We had quite enough now of a manufacturing town, and were again glad to be careering over the fresh green country, although the road was leading to Manchester, another of England's huge workshops. Along the borders of Lancashire, miserable peaty wastes intervened, more or less overflowed by the branches of the Mersey, and what soil was under cultivation! Along our route was a hard and almost barren clay; it was principally in grass, and patches of oats and potatoes, the latter crop being cultivated by the poor manufacturing population of the country, and but a sad return they must have got for their labor. So tenacious and wet was the soil, that trenches of eighteen inches or two feet wide, and of a corresponding depth were cut by the spade every three to nine feet, and the excavations from them thrown into the middle of their narrow lands, in order to round them up a little and keep them dry. Our farming fellow passengers shook their heads at sight of this, and involuntarily exclaimed, "God help such tenants, their crops can never pay!" For our part, we inwardly groaned over their condition, and only regretted that we could not at once transfer them to our own country, where their labor on a rich dry virgin soil, would be so abundantly repaid. Would that we could see about two hundred thousand hearty Englishmen and women annually brought over to America. Both countries would be greatly the gainers thereby, England only losing that which she cannot profitably employ, while America would be obtaining what she could. Surely this is a subject of national consideration, and we think it would be no less wise than considerate on the part of our Government, to take more effective measures than it now does, in the increase of a worthy and industrious emigration.

---

* St. Giles and Wapping in London, are the Five Points and Corlaers Hook of New York.

We pass over Manchester, it being but a second edition of Birmingham without any improvements, merely substituting cotton manufactures for those of hardware and plated and fancy articles. It has many noble buildings, with bridges, canals, viaducts, and rail-ways, the usual number of huge high round chimneys springing from the ground, and malt houses seven stories high. The population of Manchester and Birmingham with their environs, is about three hundred thousand each. But a drizzling rain prevailed all the time we were there, and the coal smoke and fog were so thick that glad were we to escape from the town, to pass the day with our friends at S—— Park, where we found a cluster of charming cottages, belted in from the wide world by masses of trees, and surrounded by velvet turf, and gardens adorned with flowers and shrubbery. Beyond this as the mist occasionally broke away, was a view of a fine old park, and wide extent of country, bounded at a great distance by high ranges of the Welsh mountains. It was a happy day and night to us, and with a sad heart we bid adieu next morning, and started for Liverpool.

The thermometer was certainly as low as 56°; the wind blew in tempestuous squalls, and as we crossed the Chat Moss, masses of clouds of an almost inky blackness rode frowning over the heavens, discharging torrents of rain. The dreary heath spread out as far as we could see in the thick gloom, and harmonised admirably with the roaring tempest and dark clouds above, and we dont know when we have seen anything more sublime, except a wild hurricane at sea. It was a place, a time, and a storm worthy the meeting of Shakspeare's witches in Macbeth, and we could easily fancy hearing borne on the howling wind, the words of the unearthly song of the Weird Sisters:

"Foul was fair, and fair was foul."

We never wish to pass the dreary waste of the Chat Moss in any other weather than this; and hope our next fortune will be the addition of thunder and lightning, accompanied by the darkness and obscurity of a murky night.

One cannot but admire the industry and energy of this country, for here, on this watery, black, barren heath, have they commenced their work. A wide lateral ditch is cut to carry off the water from this, every few rods in width, narrower ones run off at right angles up the wide waste, while every half mile or so, thick belts of evergreen trees are planted to break off the winds; when this is done, commences cultivation. The soil seems to be a rich vegetable mould, and on it thus reclaimed. we noticed luxuriant crops of grass, grain, and roots. We never looked upon anything witn more interest, and most gladly would we have stopped a day, had our engagements permitted, to examine minutely this beautiful transformation. As it was, we could only say in rapidly passing, "glory to old England for her indomitable energy."

A pleasant country soon followed in a high state of cultivation, and occasionally beautifully adorned, but on almost every side rose the shot tower like manufacturing chimneys, one of which is a land mark to a great distance, rising about two hundred and fifty feet high, and said to be the tallest in the kingdom. We stopped a few moments at the place where the lamented Huskinson met his death, when this rail-road was first opened. A plain marble slab niched in the wall, briefly announces the fact.

Again we started, and after a short space we entered a long dark tunnel, and emerging from this found ourselves at Liverpool.

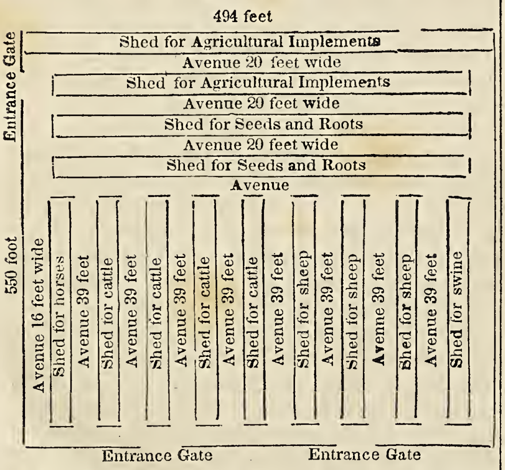
The town was overflowing with strangers, and not a bed at a Hotel or Inn to be had, and after a long perambulation, we considered ourselves fortunate in securing a resting place, at half-a-guinea each per night. As we were too late for the plowing match some six miles out, we thought no more of that, but commenced immediately looking over the town.

The commerce of Liverpool is the second in the world, being inferior only to that of London. It is a large well built place, but little smaller than New York. Its public buildings, however, are much more numerous and magnificent. Among these the most worthy of note, are the Custom House and Post-office, the Rialto, arching three sides of an open and beautifully flagged square of about two hundred feet, in the centre of which, is a noble monument to Nelson; the Town Hall, the Corn Exchange, and the great Market in Charlotte street, nine hundred and fifteen feet long. The

Mersey seemed about the fourth of a mile wide, is a muddy stream, the tides rising some thirty feet, and was alive with steam vessels, ships, and all sorts of small craft. The docks, both wet and dry, are of immense extent, and surrounded by lofty rows of warehouses. Some of the churches are a beautiful gothic, and the Cemetery of St. James is a rural gem in its way, being a deep extensive rocky excavation, in the heart of the city, from which the stone was mostly quarried to build the town. It is laid out with great taste in grass plots, ornamented with tombs, grottoes, winding walks, flowers, shrubbery, and trees, and so completely retired from the world, that it would almost seem a pleasant thing to die, and be buried there. In the centre of this Cemetery, the remains of Mr. Huskinson lie interred, and over them on a rustic basement, a tasteful circular building, with Corinthian columns, is raised, enclosing a fine white marble statue of seven feet nine in height, in the dress of a Roman Senator, and holding a scroll in the hand. We thought it no less beautiful than appropriate. Its cost was about 3,000*l.*

The Royal Agricultural show ground was a large square, four hundred and ninety four by five hundred and fifty feet, in the outskirts of Liverpool, fenced in with a high close board fence, made especially for this occasion. We think the arrangments admirable, and subjoin a rough ground plan, and also a partial view of the stock yard.

Ground plan of the Show Yard.



The first day of the show, a temporary fence divided the stock part of the yard from that of implements, seeds, &c., so that the judges of cattle should be undisturbed by the public, and though many of the best implements were out at the plowing match in trial, the tickets for seeing this part alone were charged 5 shillings, ($1 10,) which was altogether too much. The second day the temporary fence was removed, and all was thrown open to the public for tickets at 2s. 6d. each. The third day admission was obtained for 1s., and the fourth, which was the day of sale, the same, and we think this would have been ample for admission throughout every day of the show.* A board card about eighteen inches square, was hung up over the head of each animal, specifying its number, breed, age, owner's name, and if it had taken a prize, which, and the amount of the same in sovereigns. This at once told its story, and saved the asking a thousand questions. Printed catalogues in addition, were for sale, refering to all the animals, with numbers, as also seeds, roots, implements, &c.

The show was not as great as was anticipated, open as it is to the whole world, but the cold wet, untoward weather, and the epidemic that had been prevailing for some time among all kinds of stock, we were told were the reasons for this, yet about five hundered animals were present, and it proved to us a highly gratifying sight.

Class I.

Short Horns, 66 entries, 100 sovereigns in prizes. (nearly $500.) Messrs. Bates, Booth, Forest, and Etches were the successful competitors.

Class II.

Herefords, 27 entries, 100 sovereigns. Earl Talbot, Sir Hungerford Hoskyns, Messrs. Morris and Walker.

Class III.

Devons, 8 entries, 65 sovereigns. Messrs Gibbs, Umbers, and Turner.

Class IV.

Any breed not qualified to compete in the foregoing classes, 13 entries, 145 sovereigns. These were nearly all Sussex, two of the old long-horned breed, a Wyersdah cow, a Scotch black Galloway or two, and various crosses of the short-horn.

Messrs. King, Daniel, Stace, Ellman, Ellison, Woolf, and Heywood.

Class V.

Cart Horses, 19 entries, 105 sovereigns. Earl Talbot, Earl of Derby, Mr. Crisp.

Class VI.

Leicester Sheep, 52 entries, 110 sovereigns. Earl Talbot, Messrs. Bennett and Inskip.

Class VII.

South Down Sheep, 36 entries, 100 sovs. All of which was awarded to Mr Jonas Webb, except one of 10 sovs. to Mr. Grantham, for the second best Ram.

---

* This difference of price, however, is made to allow such as are willing to go in undisturbed by the *crowd*, who are kept in abeyance for the lower price.

Class VIII.

Sheep not qualified to compete in the foregoing classes, 26 entries, 115 sovereigns. Messrs. Large, Hewer, Smith, and Wells.

Class IX.

Swine, 14 entries, 30 sovereigns. Messrs. Barnard, Umbers, Dawson, and Higgins.

Besides these, there was a good deal of what was called *extra* stock, that could not compete for prizes, because entered too late, and when we mention the number of entries, it means only the persons making them, and not the number of animals, for these would amount, especially among the sheep and swine, to a dozen perhaps, under a single name.

Earl Derby, Messrs. Kendell and Hegan, each shewed a pen of Alpacas, the tall, graceful South American Sheep, of the Andes, producing wool twelve inches or more in length, and very fine and silky. There were also some of the East Indian Bramin Cattle present, and their crosses on the Alderney, but they were without particular utility, and worthy of notice only as objects of curiosity.

The show of seeds, grapes, and roots was quite respectable. One person presenting at least thirty varieties of wheat. The prize for the best kind, the Belle Vue Talavera, was awarded to Col. Le Couteur. He used three bushels of seed to the acre, and obtained a product of forty seven bushels.

A very extensive assortment of Agricultural implements were on the ground, ploughs, harrows, drills, scarifiers, threshing machines, hay rakes, &c. They were of high finish, of the best material, and more strongly and thoroughly made than is usual with us, but they were much more complex in construction, heavy, unwieldly, and needlessly cumbersome and expensive, and although we saw nothing that we could particularly recommend, as a whole, to be adopted in America, still an Agricultural mechanic, could not but on inspection, acquire some good ideas from the implements present, and it might be well worth his while, to take a trip across the Atlantic to do so. A cheese turner, however, exhibited there, would be worthy of introduction, it admirably suiting small as well as large dairies. The one present had eleven shelves, with room for five cheeses on a shelf, and by a single revolution, would turn the whole fifty five in a minute. The inventor stated, that he could turn five hundred cheeses in seven minutes, arranged on such shelves; we shall hereafter give a drawing of it. We think it unnecessary to report the prizes given for implements, and the plowing matches, and in addition to these, prizes were awarded of from 10 to 50 sovs., for written essays on various subjects, such as the best method of applying Lime, improvement of Soils, Agricultural Mechanics, early spring feed, &c. &c., which, together with other communications, are published in the Journal of the Royal Society. We may be permitted here to add, that we consider this the ablest Agricultural periodical in existence.

We were informed that the number of persons visiting the show yard during the four days of meeting were about thirty thousand. Among these we saw elegant and beautiful women in crowds, with catalogues in hand inspecting every thing, and making their comments like veritable connoisseurs. Distinguished noblemen and gentlemen were present, dressed in plain farmer-like clothes, the cuffs of their coat sleeves turned up, and handling and inspecting the stock with as much critical nicety, as the most thorough going graziers and breeders. To us, the stout, hearty, ruddy-faced people present, were of themselves a very interesting show. We have been something of a traveller in our day, and seen many congregations of men, but upon the whole, do not hesitate to say, that so far as physical condition and good healthy looks are concerned, the farming collection at Liverpool, was the finest body of people that we ever viewed asembled together. Tickets to the dinner were a sovereign each, it was a grand affair, and held beneath a pavilion, the tables rising in amphitheatre form, from a common center. About three thousand persons sat down, Mr. Pusey, the president of the society presiding. The toasts were drunk with loud repeated cheers and hurrahs. Some of the speeches were very good, but generally too long and complimentary, and in many passages, downright fulsome. How the objects of such flattery could listen to them without being confused, we were at a loss to determine, but it seems the way in this country, and we suppose that they took it as a matter of course.

The Royal Agricultural Society of England is in a high state of prosperity, it numbers now about six thousand members, (two thousand of which have been added the past year,) the annual subscription is one sovereign each, this with the receipts from the show yard, and donations from wealthy members, makes a large income to expend annually in premiums. We look upon it as one of the noblest and most exalted institutions. Its aim is to cheapen, and perfect, and multiply the prime necessities of life, and to attain this object, the talents, the learning, and the wealth of Great Britain are lavishly bestowed, and the return for all these, we venture to say will be a thousand fold. We hope soon to see this liberality imitated in all its best features, by an American National Agricultural Society. What comforts, what intelligence, what happiness might it not be the means of introducing among us; let every lover of his country then, and of his species, arouse to the establishment of this, together with State and County auxiliaries throughout the land.

ORIGINAL CORRESPONDENCE.

We must acknowledge our indebtedness to our friends, for the correspondence they have so liberally proffered us for the public, in this first number. We shall be happy at all times to give place in our columns, to all well written communications on the subjects to which this paper is devoted.

Something about Western Prairies.

BY SOLON ROBINSON.

To the Editor of the American Agriculturist.

In addition to your note, suggesting that eastern readers are ever anxious to learn facts about the "great West," I have received a great number of inquiries, some of which I will answer through your columns.

And although the matter may not be altogether upon the science of agriculture, it may be such as will induce scientific reading, in the contents of agricultural journals.

In my late tour through the Eastern States, how often I heard the exclamation, "I do wish I could see a prairie!" "How do they look?" "Ah, well! I shouldn't like to live on one, they are *so level.*" "An't it very troublesome getting about through the tall grass?" "How do you plough them?"

Notwithstanding that others, as well as myself, have often, both publicly and privately, answered these and many other similar questions, "the demand is increasing," and the public are "like as two peas," to my little children, with their, "do now father, tell that story again."

In the first place then, my dear reader, I also wish you could see a prairie. You would feel as you never felt before. You would feel as I once did, when for the first time I stood upon the edge of the prairie upon which I now reside. "It was about noon of a beautiful October day, when we emerged from the wood, and for miles around stretched forth one broad expanse of clear, open land. I stood alone, wrapt up in that peculiar sensation that man only feels when beholding a broad rolling prairie for the first time—an indescribable delightful feeling. Oh, what a rich mine of wealth lay outstretched before me."

And although that was seven years ago, yet almost the whole of that mine of wealth still holds its hidden and unsought for treasures. No plough or spade has broken the sod of ages; no magician has appeared with the husbandman's magic wand and said to the coarse and useless grass that has grown for centuries, "Presto, be gone," give place to the lovely Ceres with her golden sheaves.

And here, methinks I hear some reader exclaim, "Well now, I guess it an't so plaguy rich a'ter all, or it would'nt lay there uncultivated." Little does he know or think as he digs in the corn among the stones of New England, what vast quantities of such land lie waste in the West, and how few there are there to improve them; and what is worse, how indolent a great portion of that few are. Talk of the country being sickly, why the worst epidemic that ever raged in any country, is that idleness which fixes itself, incubus like, upon the whole population of an extraordinary fertile soil.

I am sorry that I am not able to answer the second question, even satisfactorily to myself. But who that ever undertook, ever satisfied his inquirers as to how a prairie looks, while in a state of nature. The reason is that there is nothing analogous, to which one can compare it, in a thickly settled country. But suppose that the reader fancies the country with which he is best acquainted in an old settled country, entirely destitute of buildings or fences, or in fact any mark of civilization, with all the hills reduced so as to make a gently rolling surface, the woodland to remain as it is, and the entire surface of cleared land covered with grass—that upon the upland thick and short, and in the low lands one or two feet high, and in the swamps four or five feet, and he may have a very faint idea *how a prairie looks.*

So you see they are not so "very level." Gently undulating, applies to all prairie countries within my knowledge. Sometimes, though rarely, hills occur that are too steep to cultivate conveniently, and sometimes rocky bluffs. But a general characteristic in this region is destituteness of stone, except a few boulders of granite, that have come from parts unknown.

The streams are most generally muddy bottoms. The timber in the groves or islands that abound throughout this sea of grass, is most commonly short, and grows thin upon the ground, without underbrush, except at the edges, where the hazel bush seems to be the advanced guard, and is constantly encroaching upon the prairie. There are large tracts of timber land called "barrens," which are about half way between prairie and timber land—the tree standing apart like an orchard, and the ground covered with grass, the sod of which is much less tough than that on the prairie.

One very prominent feature of a prairie, I should mention, and that is the constant and ever varying succession of flowers from spring till fall.

A singular and false notion prevails about the height of the grass, and that it must be difficult getting about. It is not even difficult for a sheep, as the grass never grows high enough upon the dry land to impede or hide them. Near the banks of streams, or in marshes, it is like going through a field of oats or wheat. And it is in such places that grass is cut for hay—some very good—some good—and some that the less said about, the smaller the sin committed.

But as for pasturage, no country can excel this. The milk, butter, cheese and beef attest the rich juciness of the feed. But we lack the beautiful blue grass pastures of Kentucky, for fall feed. Even now, near the middle of December, notwithstanding we have had a hard fall for this country, this grass is green and good. Even timothy or red top would yet afford "a good bite."

The next wonder is about ploughing. And if, my dear reader, you who have ploughed so many acres of green sward with old "Duke & Darby," could only see a "prairie team," you would wonder still more.

Fancy upon a level smooth piece of ground, free from sticks, stumps and stones, a team of four, five, or even six yoke of oxen, hitched to a pair of cart wheels, and to them hitched a plough with a beam fourteen feet long, and the share, &c. of which weigh from sixty to one hundred and twenty-five pounds, of wrought iron and steel, and which cuts a furrow from sixteen to twenty-four inches wide, and you will figure the appearance of a "breaking team" in operation. If you ask me if this is necessary, I can only tell you that I suppose it is, for it is *fashionable.*

I do believe though, that a smaller plough and less team would be better for the land, though it is said it would be more expensive ploughing. It is true that the sod is more tough than can be believed by those who have never ploughed it. It requires the plough to be kept very sharp, and for this purpose the ploughman is always provided with a large file with which he keeps a keen edge as possible upon the share and coulter.

Such a team ploughs from one to two acres a day, usually about four inches deep, which is not near down to the bottom of the roots, so that the sod turned up affords but a scanty covering for grain that is sowed upon it at first, yet very fine crops of wheat are raised in this way. It is also a common practice to break up in the spring and drop corn in every second or third furrow, and from which twenty or thirty bushels to the acre are often gathered, nothing having ever been done to it after planting. It takes two or three years for these sods to become thoroughly decomposed, and then the soil is of a light, loose, black vegetable mould, very easily stirred by the plough, but of a nature that it adheres to the plough in a troublesome manner. In fact, no plough has ever been found to keep itself clear; and the ploughman is generally obliged to carry with him a small wooden paddle, with which to clear off the adhering mass of dirt upon the mould board With this exception, the prairie soil is generally one of the easiest in the world to till, and of course remarkably fertile.

By far the greatest portion is based upon a sub-soil of clay, though in many places the sub-soil is sand or gravel, and there are large tracts of which the surface is of this material. The streams are often broad and nearly covered with vegetable growth, in some instances to that degree that sheets of water many rods wide actually burn over during the autumnal fires.

Notwithstanding the many "interesting accounts of burning prairies," the fire upon a dry prairie in a calm time does not blaze as high as it would in an old stubble field. But in the marshes or wet prairies, it sometimes rages with most magnificent grandeur.

There is one more question often asked, that deserves some notice; and that is, "How is this land ever to be fenced?" This is a question that deserves serious consideration.

The settlements already made are upon the smaller prairies, the centre of which are not more than four or five miles from timber, or along the border of "the Grand Prairie," taking care not to extend out beyond the reach of convenient woodland. But there are many places where the groves are barely sufficient to furnish the land most contiguous, and vast tracts of prairie are to be found ten or fifteen miles from timber. That these tracts will for ever remain uncultivated, cannot for a moment be thought of. That timber can be planted and raised in abundance is certain. It is equally certain that they can be fenced with ditches, and perhaps with hedges, though the experiments that have as yet been made in the United States to enclose land with hedges have generally proved failures.

The most feasible plan, it seems to me, would be to enclose large tracts by ditching, and cultivate the land without division fences, even between many occupants. Such is the mode in many parts of Europe, and more particularly in China. Or this kind of land could be profitably improved by grazing herds of cattle and sheep under the care of shepherds. Houses of a most comfortable kind can be built of clay without burning into brick, and the expense of hauling lumber for roofs and inside work would be trifling. The only difficulty would be fuel. In many parts of the West coal exists in abundance, and where that is not to be had, the expense of hauling wood over a smooth and nearly level country would not be a serious obstacle. It is also thought that peat will be found abundant.

At present, however, there is an abundance of unoccupied land so convenient to timber as to be easily fenced in the common way, with Virginia or worm fence, and the oak timber of this region is very durable.

I have heretofore published several articles of advice to western emigrants, which I have much reason to believe have been well received by the public, and I have received many earnest solicitations to make further remarks upon the same subject. But my present letter has become too long to do it now, but if my health is spared, I hope to have the will and ability to do so hereafter.

In the mean time, permit me to say that although I am a new correspondent to your new paper, yet I hope you may so meet with public favor as to be able to write yourselves down to the public as I do now,

Your old friend,
Solon Robinson.

Lake C. H., Ia., Dec. 10, 1841.

Seeding down and retaining lands in Grass.

There is perhaps no individual item of cultivation more important to the general farmer, and none so indispensable to the stock farmer, as the produce of the various grasses. In our American husbandry, where the saving of labor is a cardinal virtue in the farm, it is of great importance to maintain *permanent* pastures and meadows. This, as we have ofttimes in our experience observed, is easily and cheaply attained. Not on all soils to be sure, for there are those so sterile and loose, so dry and rigid that but two or three crops can be cut or fed, until it is necessary to plough and crop the land, to fit it for a new seeding of grass, and so onward in successive courses of cultivation. But there are soils, and those comprising the great mass of our western New York farms, which are tenacious of the grasses, and with proper care, will probably produce them in endless succession for centuries—at least they have thus far since the settlement of our country. On these, perhaps no crop is more profitable, or requires less time and labor. It is therefore desirable to perpetuate it without disturbance, and add if possible to its value and productiveness.

In laying lands down to grass, the season, and the manner must depend on the crop which is to precede the grass, and the condition of the soil. If the seeding crop be winter wheat, or rye, the grass seed should be sown on the last snows in March following the grain seeding; or if no snows occur, during the breaking up of the frosts in early spring, it should be sown while the seed can effect a lodgement in the open crevices of the soil. The objections to sowing the grass seed with the winter grain are that it will grow so rapidly through the autumn as to injure the spreading of the young grain before the setting in of winter, and choke its full and vigorous growth in the spring and summer. If the grain be sown in the spring, barley and spring wheat are preferable; but oats will answer to seed with, requiring, as we think, a trifle more of seed than when sown with the other grains. If the land be stony, or stumpy, great care should be taken to get it as smooth as possible, for the convenience of mowing.

Quantity of seed per acre.—This will depend somewhat on the quality of the soil. As timothy (*Phleum Pratense*) and red clover (*Trifolium Pratense*) are the principal, and, I may add, the best grasses cultivated in our country on the uplands—the proportions may be varied as the soil predominates towards wet or dry. On moist soils, at least two-thirds to three-fourths of timothy should prevail—on the drier, the proportion of clover should be greater, perhaps one-half to two-thirds. From eight to twelve quarts of mixed seed should be sown to the acre, and if used with the spring crop, well harrowed, bushed, or rolled in. During the first year, no heavy stock should feed upon it, as the ground will not have acquired sufficient compactness to resist the cutting of the young turf by their feet, nor should animals ever be permitted to poach them in spring and fall in soft weather. This is very injurious. During severe winter frosts, and snows, and in the grass growing seasons, farm stock may range mowing grounds with impunity, but at all other times they should be kept away.

After management.—If the soil be a clay, or tenacious loam, provided it be properly treated, we know of no good reason why either meadows or pastures should *ever* be broken up. These we consider the best and most natural grass lands to be formed. Gravelly and sandy loams occasionally are tenacious of grasses, and will ofttimes hold them with good top dressing, either in meadow or pasturage for centuries—but in dry hungry soils, they often *run out*, as the term is, in two, three, or four years, and demand renewal, with fresh cultivation, and the application of active manures. We have seen numerous mowing and pasture grounds in lands free from stone, which have *never* been ploughed. The first crop of oats or wheat after clearing, had been simply dragged in with grass seed, the grain crop cut, and the grass ever afterwards yielding its annual and abundant crop of either hay or pasturage. On all soils where vegetable decomposition is abundant, no cause but the uneven condition of the surface owing to the decay of stumps, displacing of stones, &c., should demand breaking up meadows or pastures, unless for grain or root cropping; for it is considered doubtful among many of our best stock farmers, whether vegetable loams ever produce better, if so well, without frequent manuring, after the top soil left at their first clearing be disturbed; and they do in numberless instances submit to the inconvenience of mowing their meadows with a very rough surface year after year, rather than risk the replacing them with a sward after being ploughed and smoothed down. Undoubtedly there is much prejudice in this, but when intelligent farmers persevere for a long series of years in a usage sanctioned by their own experience as satisfactory, their opinions are entitled to consideration.

As before observed, we consider the tenacious moist soils the natural land for grasses. In these, if properly treated, they will grow for centuries. A top dressing of stable manure, compost, ashes, gypsum, or any fertilizing matter, either in spring or autumn, will keep them in abundant fertility if in meadow; and if in pasturage, the droppings of the animals depastured, will amply recompense for the herbage consumed. Properly treated, grass lands will rarely become bound, or mossy; but should they ever become so, a thorough scarifying with the harrow, a sprinkling of seed, and a good top dressing of manure or ashes, will always bring the grass into an abundant crop. All standing surface water should be removed by draining, and the wild grass which it produces will be immediately expelled by the timothy and clover, and become equally productive with the other portions of the field. If running water can in any instance be directed upon meadows in the spring and summer months, properly graduated and controlled, the crop of grass can be greatly augmented, as it supplies no inconsiderable portion of the food of grass, and in many instances meadows have produced for a long series of years heavy crops without other applications than artificial waterings. In England, this method of treatment is now obtaining great practice, wherever available, and oftentimes enormous expense is incurred to carry streams by canals to distant meadows.

Old mowing and pasture lands are sweeter and more nutritious in their grasses than those freshly laid. The grass is finer and thicker; and the produce is more steady and abundant. In some of the fine stock and cattle regions of England and Scotland, old pastures and mowing lands rent for twenty to twenty-five dollars the season per acre, when those newly laid will earn only half the sum; always being preferred to the newly laid grounds—and their experience is well worth our consideration on this side the Atlantic. Many meadows in this country can be found which yield two to three tons, and sometimes more per acre, which have not been ploughed for an hundred years, with occasional top dressing, and sometimes with or without flowing them with water. In the interior, gypsum is annually used in great quantities by many of the stock and dairy farmers, upon both mowing and pasture lands, at the rate of one to two bushels per acre, and is found a great promoter of the growth of grass. The dairymen and graziers of New York, and the western counties of New England, are adopting the use of this valuable material with great benefit to their interests, and the constant improvement of their farms; and it is now well ascertained among the best of our stock farmers, that permanent grass lands are not only the cheapest, but the best for their purposes.

We have spoken of timothy and red clover. For all feeding purposes, we consider these as yielding the best hay and the most productive for meadows. On soils that are very wet, they dwindle, and in some instances refuse to grow. Such, if practicable, should be drained; or if not, the red top, or foul meadow, and coarser grasses should be cultivated. In pastures, the more kinds of valuable grasses that can be introduced the better. White clover (*Trifolium repens*) and blue grass* (*Poa Compressa*) are indigenous to most of our soils, and produce sweet succulent feed; but as they are neither so rapid in growth, nor so easy to feed as timothy and red clover, the latter should predominate where friendly to the soil. For sheep, and close feeding animals, however, perhaps no grasses are sweeter and more nutritious than the white clover and blue grasses.

There is also another great advantage in cultivating timothy, principally as a hay crop. It dries away less, or loses less weight in curing than most other grasses, and if not cut too early, yields great quantities of seed, sometimes as high as twenty-five or thirty bushels to the acre, and the straw makes a very tolerable hay. It suffers less from long standing in the field after fit for the scythe than other grasses, and taken altogether, cattle, horses, and sheep are fonder of it than any other hay. It should never be cut until it has passed the flower, and the pollen begins to drop from the head, and then for all feeding purposes the sooner cut the better. Even then, much of the seed will ripen. Ordinary farm stock fed on this hay will thrive if they have *enough* of it, and our own cattle have often, when purchased late in the fall, gone into the stables in low condition, and come out in high flesh in the spring with no other food than timothy and clover hay, water, and salt.

---

* Judge Buel asserts this to be the common spear grass of the Northern and Middle States; and the Hon. Henry Clay pointed it out to me as identical with the blue grass of Kentucky and the Western States.

We might pursue this subject with much interest, in discussing the best methods of cutting and curing hay, feeding farm stock, &c.; but as it leads us into a longer essay than we intended at our commencement, we must defer it till another time. L. F. A.

TREES AND SHRUBS

Considered with reference to their Importance in the Economy of Nature, and to Man.

[From a forthcoming work on the "Trees of America," by D. J. Browne, C. E.]

Few objects can be more innocently pleasing and of more importance in the economy of nature, and to man, than the various vegetable productions of the earth. The large proportion which its surface bears to its herbage, and the immense extent of the forests in comparison with that of meadows, pastures, prairies, or plains, seem to indicate that trees and shrubs act an important part in the economy of our globe. In countries uninhabited by man, the influence of forests must be on the climate, on the soil, and on the number of wild animals, and herbaceous vegetables. In civilized countries, to those influences must be added the relation in which they stand to man.

It appears highly probable, that the greater part of the surface of our globe has been, at one time, covered with wood; because, among other reasons, coal is found in nearly all countries in both hemispheres from the equator to the poles; at all events, it is certain that this has been the case with the greater part of the temperate regions of the globe at no very distant period. The whole of the American Continent was until lately, almost entirely covered with trees and shrubs, and presented few naked surfaces, except those of the prairies, alluvial deposits on the banks of its larger rivers, and on the tops of the highest mountains; and what was so recently the condition of America must, we may reasonably suppose, have once, at least, been that of every other part of the world.

The influence which a predominance of forest must have in a country uninhabited by man must have extended to the animals, the herbaceous vegetables, the soil, the waters, and the climate. To wild animals of every kind, especially to those of the more ferocious tribes, forests have, in all countries, furnished shelter, and, in a great measure, food—birds, insects and reptiles are the more common inhabitants. Herbaceous plants are, for the most part, destroyed by dense forests; but some kinds are encouraged by the thickness of the shade, and the moist heat which prevails among the trunks and the branches of the trees. But the great influence of forest scenery in a wild state is on the soil; and, in this point of view, natural forests may be regarded as a provision of nature for preparing the surface of the earth for the cultivation of the chief productions which constitute the food of man, and of domestic animals. It would be interesting to show how the soil is furnished with that organized matter, so essential to the growth of perfect plants, by the decay of leaves, and, ultimately, by the decay of trunks and branches. The waters of a country, the rivers and lakes, are invariably affected by the state of the woods of that country. These woods, and their mossy beds, must, in all cases, act more or less as a sponge in retaining the water which falls on them; and water must thus be supplied more gradually to the rivers, in countries covered with wood, than in those which are cleared, and regularly drained. A striking instance, illustrative of the above facts, occurred in the valley of Aragua, in the Republic of Venezuela. Oviedo, who, towards the end of the fifteenth century, so often traversed this valley, positively affirms that New Valencia was founded in 1555, at the distance of half a league from the lake of Tacarigua. The same place was visited by Humboldt in 1800, and it was found that the town was situated more than three miles distant from its banks. In the meantime, new islands appeared in the lake, and the space which had been exposed by the retreat of the waters, was transformed into the most fertile fields, where the cultivation of indigo, sugar, cotton and cocoa had been carried to a great extent. In the year 1800, the valley of Aragua maintained a population as dense as the most populous portions of France. The cheering prosperity which existed in the numerous villages, teeming with an industrious yeomanry, could not be witnessed without the greatest satisfaction. After a lapse of twenty-two years, this country was again visited, and it was remarked by the inhabitants for many years, that, not only the waters of the lake had ceased to subside, but, on the contrary, that they were rapidly rising.

Within the period which had intervened, important political transactions had occurred. Venezuela now no longer belonged to Spain. The smiling valley of Aragua had been the arena of the most bloody contests, and war and death had desolated those happy scenes, and greatly reduced the population. On the first cry of independence, a number of slaves obtained their liberty by fighting under the standard of the new republic. Its wide-spreading cultivation was neglected; the forest trees, so luxuriant within the tropics, had again, in a great measure, usurped dominion over that region, which its inhabitants, after a century of constant and painful labor, had reclaimed. During the growing prosperity of the valley of Aragua, the numerous streams which fed the lake, had been arrested and employed in innumerable irrigations, and their beds were found dry for more than six months in a year. At the last epoch to which we have alluded, 1822, the streams being no longer so diverted, flowed without interruption. Thus, then, the progress and continuance of agricultural industry in the valley of Aragua, when the process of clearing was carried farther and farther, and when cultivation in every variety was advancing, the level of the water gradually subsided. More lately, on the contrary, during a period of misfortune, when the clearing was no longer continued, and the cultivated lands have fallen back into their primitive wildness, the waters having ceased to fall, and are now very speedily assuming a rising movement.

The same facts are corroborated by numerous other instances. "In laying low the forests," says Humboldt, "which cover the tops and the flanks of the mountains, mankind, in all climates, are, at one and the same time, entailing two great calamities upon succeeding generations—a scarcity both of wood and of water." The truth of this remark we find verified by examining the history of all the civilized countries of the globe. The influence of forest scenery in increasing the moisture of the atmosphere, and in preventing a climate from being so hot in summer, and so cold in winter, as it would otherwise be, is well understood, and need only be mentioned.

The utility of studying the influence of trees in an uncultivated country is, to afford useful hints with reference to the planting or thinning of them in countries which are civilized. That which is applicable on a grand scale, where forests cover many thousand acres, must operate more or less in the same manner where they extend only to a few acres; and, consequently, this influence must be kept in view in the formation of plantations both useful and ornamental. If forests, in their primitive state, supply food to birds and insects, or afford shelter to larger animals or reptiles, in a civilized country birds and insects, larger animals and reptiles, may be expected to abound more or less wherever there are trees and shrubs to supply them with food and shelter. Hence the advantage of knowing what trees and shrubs are obnoxious to particular insects, and what insects attack trees and shrubs generally. The total destruction of herbaceous plants in dense forests enables us to know, that, where we wish the grass or other herbage under trees to thrive, we must plant or leave the trees thinly; and the influence from the decay of leaves, branches, and trees, in adding to the soil teaches us how barren soil may be improved by trees; and this natural effect has been imitated by trenching down entire plantations of Scotch pine, grown on extremely poor soils, in some parts of Scotland. Undrained woods are known to retain the water which falls on them much longer than open groves or plains; and, as increased exhalation and evaporation must be going on from such woods during the period of retention, an increased moisture must be thus produced in the atmosphere, and the circumstance may demand consideration in planting extensive shrubberies near dwellings; and, more especially, in planting such as are intended, by frequent digging, always to present a surface of naked loose soil. The influence of trees in modifying both the temperature and moisture of the atmosphere in civilized countries and in artificial scenery, is generally known; and this knowledge should not be lost sight of in the disposition of trees and shrubs about houses, more especially in low situations. There is great reason to believe that many residences in this country and particularly in England, naturally healthy, are rendered unhealthy by the superabundance of trees and shrubbery, and by the quantity of loosened earth in their immediate vicinities. The insects which often infest the rooms of our houses, are also very much increased by the proximity of wood.

From trees and shrubs in a wild state we can only truly learn their primitive natures; because plants, like animals, begin to change their habits as soon as they are taken into cultivation. The fact that this change takes place ought to be borne in mind, when we wish to improve a tree by placing it in a different soil or situation from that in which it is found in its natural state. There are certain soils and situations, however, in which plants are found in a wild state, that can hardly be improved by art; these are peat bogs or swamps, such as are found in many parts of our country, and Alpine situations.

So various and important are the uses of trees and shrubs to man that to say much on the subject here would go beyond our circumscribed limits. In spring, when they put forth their young buds; in summer, when they exhibit their fully-expanded leaves; in autumn, when robes of every variety of hue are hung upon their branches; in winter, when the glory of summer is trodden under foot, presenting around a scene of apparent desolation, he beholds them, on all occasions, as affording the means of enjoying the most varied pleasures. Their great utility in many arts, and their absolute necessity to animal life must contribute to give him a reverential feeling for his Maker, who has created all these things for the comfort and happiness of the animal world, more especially for us mortals. Look at the beauty and variety of their growth! What cradles, arches, avenues, pyramids of verdure, loaded with fruit, presenting the most enchanting habitations. What happy nations live under these peaceful coverts! What delicious banquets are here prepared! Nothing of them is lost—man feeds upon the fruits, quadrupeds eat the tender leaves, birds the seeds, and other animals the roots and the rinds, and, lastly, the insects devour the offal. Every part is of use to some animal—all nature teems with living matters through its ever-varied and innumerable productions.

Indian Corn for Soiling.

Should we ever have recourse to the soiling system in America, we are confident that we shall find Indian Corn, far superior for this purpose to any of the European grasses so highly lauded. If with Lucerne, the different kinds of clovers and Italian Ryegrasses, they get in England, six to eight tons of *green* food per acre they think it an abundant crop; but from an experiment lately conducted by the Honorable Mr. Ellsworth at Washington city over one hundred tons corn fodder have been produced. Judging from a reasonable calculation, and from one cutting alone, we believe that on our medium qualities of corn land, twenty to thirty tons might generally be depended upon.

The experiment below as detailed by Mr. Carpenter, shows a great product, but as he took no pains to ascertain the quantity, he is desirous of being within bounds, in estimating the yield. The best time to commence feeding, is very properly noticed, and important in practice, otherwise the stock scour, and it does them more harm than good. In order to keep up feed for soiling through July, August, and September, it will be necessary to sow at different times, from the first commencement of the season till July. We should think this a system worthy of adoption in the more southern latitudes, where during the summer and fall, pastures are liable to excessive droughts, whcih scorch up all the grass, and cause much suffering to stock, from the want of green food. Care should be taken when sown late to *soak* the corn and sow immediately after a shower; and if sufficiently thick, it will in a short time after it is up, shade the ground sufficiently to prevent the otherwise injurious effect of the sun.

Another important thing to be noticed in this crop is, the large ears it produced, notwithstanding its thick planting; but we are of opinion that this could not generally be depended on. It was probably the very favourable season that insured the growth of these; it will be seen that Mr. Carpenters subsequent failures go to corroborate our opinion.

Dear Sir: Sowing corn broad cast, I have some experience with for soiling, and my first effort was the most successful. I prepared one acre of ground, a sandy loam, manured about four inches deep with cow manure, which is very compact, and therefore the most suitable for this kind of soil. I ploughed deep cross ploughed and harrowed until well pulverised, and sowed the corn broad cast the 4th of July. In a few days it was up, and so very thick that I was fearful it would not amount to half a crop, but the season happened to just suit it. About the 10th of August, I commenced feeding, but the cattle did not relish it, and I soon found it was not sufficiently matured, it being at this age watery and liable to scour them. I then left it till about the 25th of August, when it began to top and tassle, the saccharine matter had by this time more fully matured, when the cattle eat it greedily.

By the 1st of September, the most forward stalks were in roasting ears, and I found that my cows, not only increased in the *quantity* of their milk, but the *quality* also was much *improved*, and although they were grazing on blue grass pasture, they eat every particle of the green corn, which continued to grow very luxuriantly, the stalks rising from ten to fifteen feet high, the size of those on our rich bottom lands, and so thick a dog could not run through them, I have repeatedly tried to walk into the corn, but it was as impenetrable as a cane brake. It may appear like exaggeration, but almost every stalk had one ear and some two, they were not mere nubbins, but ears eight or ten inches long.

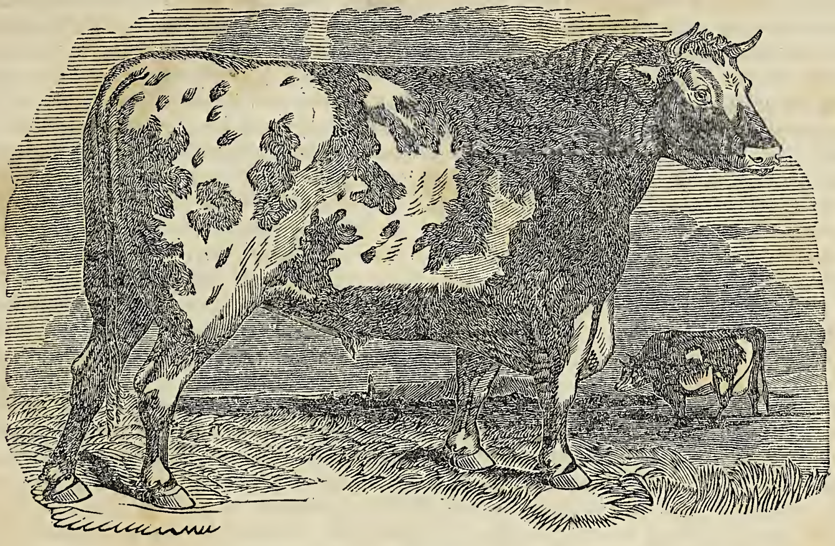
I have always regreted I had not made an accurate calculation of the amount of bulk it yielded, but I supposed I should have no difficulty in raising just as good a crop every year, but I never succeeded so well, although I have repeatedly tried. The drought, a heavy wind, or something would turn up to shorten my calculations, yet the after crops yielded more food than anything else I ever tried; and it is a crop well worth the trouble and expense. I presume at my first trial, that I cut at least sixty tons from the acre of green food.

To ensure a good crop my plan would be this. Take a rich piece af loam sow it in wheat in the fall, soil it off in the spring; and as soon as the crop was done, manure it highly and then sow the corn. I have found wheat and corn to be the most valuable green crops for soiling and I have tried oats, rye, clover, and millet. A small patch of wheat and corn will pay every farmer well for soiling; rye is good, but I much prefer the wheat, unless it is to stand over the summer, rye then is the best, as it produces a crop of grain after spring feeding, and again sows itself if wanted for the next spring pasture, which wheat will not usually do. Respectfully yours,

Ezra Carpenter.

A. B. Allen, Esq.,

Cincinnati, 17*th January*, 1842.



For the American Agriculturist.

GENTLEMEN,

It is well known in this vicinity, during the existence of our former Agricultural Society, as well as that of the "State Board of Agriculture," that in the summer of 1824 the late Hon. S. Van Rensselaer, imported from England, through the agency of Jonn S. Skinner, Esquire, editor of the "American Farmer," one bull and two heifers of the "Improved Durham Short Horned" breed of cattle, being the first I believe of that valuable race introduced here.

The enterprize of men of wealth, stimulated by a zeal for improvememt, which our agricultural associations have called forth, has done much to improve our farm stock, by the introduction of the choicest breeds of animals to be found in Europe.

With a commendable liberality, Mr. Van Rensselaer not only offeredthe use of his bull, gratis, to the farmers, but made presents of all his bull calves to such persons, as he presumed would be the means of doing the greatest good in diffusing the blood throughout the country. From this it would be naturally supposed that all the farmers in the immediate neighborhood would avail themselves of the privilege offered them. But such was not the case, and the bull was suffered to stand from year to year, at the farm, unnoticed and almost unknown, until about the year 1830. Whether this arose from the fact of his offering the use of his bull gratis, or from what other cause I am unable to say; but it is no less wonderful than true, as soon as a charge was made for his service, his value, all at once, seemed to be appreciated, and cows were sent from various directions.

About this period, Mr Bennett, the present manager, took the possession of the farm. It is due to Mr Bennett to say, that through his attention and exertion, the stock soon rose into notice, and attracted the attention of those spirited farmers that have sprung up in every section of our country, and large drafts were made from his yard and at remunerating prices.

So many individuals of their stock, and descendents from them are dispersed all over the country that a history of the originals, seems to be called for, and for that reason, I have attempted to throw together such information in regard to them as I possess.

Washington whose portrait adorns the head of this article, was in color a dark red, with white or roan spots interspersed over him, bred by Mr. Champion, of Blythe, England. In a letter accompanying him, Mr. Champion says, "The Bull, I have sent is very superior; he was three years old March 25th, 1824. He was got by a son of Blythe Comet; (who obtained the first prize of twenty guineas, for the best bull shown at the Lancaster agricultural meeting in 1821;) his dam by Blythe Comet, (and a great milker) his gran-dam by Prince; great gran-dam Neswick; from all the last three bulls I have bred many superior and valuable animals. I do not hesitate to say that he possesses more valuable points, substance, and desirable quality of flesh, than any bull I ever saw with as light bone and offal; and I feel great pleasure that I have such an animal to send to America."

Never did words prove more true than did the above as regards Washington, as his stock will testify. One thing however, is well worthy of remark; *all the calves got by Washington, after he was ten years old were superior to those got before that period;* thus refuting the too common and popular opinion, that bulls are not good for stock, after they are three or four years old. Although I never saw him in high condition, still, he always discovered great stamina, much vigor, spirit, and strong constitution. He lived to a good old age, and died in 1839 when 18 years old.

On his arrival in this country Mr. Van Renssellaer changed his name and called him Champion, after his breeder, as he had too great a respect for our worthy and adored countryman to possess an animal bearing so venerable a name; therefore he always went by the name of "Champion" until 1830, when it was suggested to call him by his proper name, Washington, as recorded in the "Herd Book."

Several spirited individuals at that early period, who had devoted some attention to the improvement of stock, and amongst others, Mr. Featherstonhaugh, then of Duanesburgh, in an adjoining county, sent a cow to him. I cannot resist the desire to insert here an extract from Mr. Featherstonhaugh's letter to Mr. Van Renssellaer, in 1825, on the subject of his calves.

"Sir—having now had an opportunity of examining some of the calves got by that magnificent bull *Champion*, (Washington,) imported by you in the summer of 1824, I sit down with much pleasure to communicate to you, as you have desired, my opinion of the relative value of the improved short horned stock, with the other breeds of cattle known to us here.

So many individuals of that breed have within the last ten years been brought from England into this and into some of the neighboring States, and their descendants are now so widely spread, that opportunities for observation and comparison are becoming very abundant in the vicinity of the coast; and even offer themselves, although partially as yet, in the interior.

I have upon different occasions availed myself of the increased facilities for observations of this nature; and with the aid of my personal experience in this and other breeds of English as well as of our own native cattle, do not hesitate to say, that I have seen many individuals of the pure blood of the improved short horns, which have descended from imported stock and their progeny in no manner degenerated from the fine animals they sprung from; and their mixed progeny, got by short horned bulls upon the finest American cows, as far as they have fallen under my observation, *and they have been taken proper care of*, surpass any of the native or mixed breeds I have yet seen in the United States. I am aware that warm controversies have arisen on this subject amongst us, which was the case in England for a while. The owners of the stately short horns have been accused, in both countries of pressing their favorite stock into notice; and the Herefords and Devons, to say nothing of others, have taken the field against them. Public opinion, however, on the other side of the Atlantic, as far as I am acquainted with it, appears to be decidedly in favor of the short horns. Every year seems to bring them an accession of patrons, and to strengthen the opinion that it is a breed which *renders the most money in the shortest period of time.*

When you apprised me of the arrival of your fine bull Champion, (Washington) last summer, I availed myself immediately of your kind offer, and sent one of my short horned cows to him. She brought a bull calf on the 5th of May last. He has been raised from the pail, from his mothers milk. We have raised six other bull calves of different breeds, who have sucked from their birth, being requested they should do so by those who gave orders for them; and at this moment he is worth nearly twice as much to the butcher as any of them. He resembles his sire in most of his points, and is the best calf we have ever had.

Another instance is worthy of record. A farmer, by the name of Hollis, who emigrated from England and settled in the county of Otsego, 90 miles from Albany, drove his cow that distance to go to Washington. Mr. Van Rensseilaer was so much pleased with his spirit, for the improvement of his stock, that he not only tendered him the use of his bull but actually boarded him while he was obliged to stay with his cow.

I have said at the commencement of this article that there were two heifers imported with Washington, one of them is described in Mr. Champion's letter refered to before, as follows. "The dark red and white heifer, I have named *Conquest.* She was got by Conqueror, (a son of Warrior,) sold last year by me for 100 guineas; her dam Coats' Tulip is by Blythe Comet; grand dam by Driffield; great grand dam young Hart, by Haughton; great great grand dam by a bull of Mr. Cornforth of Banferth, near Darlington. Conquest you will find a most elegant heifer, remarkable high formed shoulders, and promising to grow to a large size and descended from an excellent milking sort."

This heifer slipped her calf on ship board and never after would breed; was fattened and slaughtered, she was said to be much the finest animal of the two.

The other was a roan heifer, named *Pansey,* "she was got by Blaize; (a son of Blythe Comet;) her dam Primrose by Marson's Charles, (for the use of which bull for two years, the late Mr. Mellish and myself paid 450 guineas; grand dam by Blythe Comet; great grand dam by Prince; great great grand dam by Mr. George

Coats' Patriot, which bull he sold into Lincolnshire for 500 guineas; she is a very neat heifer, her bone and offal very light. Primrose, her dam, is a most magnificent cow; and she is the dam of the bull I sold to Mr. Singleton."

Pansey produced a bull calf in December, after she was imported, who was got by Aid de camp, and was called Young Champion, and was taken a few years since by Henry Van Renssellaer, to his estate in St Lawrence County, near Ogdensburgh. So we may say, from Washington and Pansey, all the stock commonly called and known as the "Patroon Stock," have originated, as I am not aware of any calves having been reared from "Young Champion." Pansey died two or three years since, at a ripe old age.

This stock has always been noted for great thrift—taking on flesh very readily—fair milkers, and Mr. Bennett says, are out of fine deep milkers.

C. N. Bement.

Three Hills Farm, March 1842.

English Farming Stock.

London January, 8th 1842.

Messrs Editors

One of the most interesting places to me is the Smithfield cattle market. The field is in the very heart of the city, and filled with small pens for sheep and hogs or with low posts and rails to fasten cattle to, as they are all tied up as soon as they get into the field. One sees here every variety of stock which the kingdom can produce, and no bad samples of the quality of the different breeds. I doubt whether you could find a place any where else, that would enable you to compare side by side, the various breeds, and grades of British stock. I have been at the market two days. Each day there was upwards of 16,000 sheep, and about 2,500 head of cattle. I have seen much the same disparity in the proportion of cattle and sheep in most of the other large markets. Mutton is the most profitable meat the farmer can raise, as it gives a quicker return for his capital, and at a better profit, than any other stock he can keep. The consumption of mutton is enormous. The first consideration of the farmer is to get that kind of sheep that will give the most meat in the shortest time. Wool is no consideration, or at least only a secondary one, as all their fine wool is imported. Hence professed breeders have aimed in all their improvements, to get a large carcass and early maturity.

The best mutton is the small black faced Scotch, the Welsh, and the *natural* South Down; I say natural, for in its natural state the South Down is not a very large sheep. The improved South Down I think must be the result of a cross between the South Down and the large long-wooled sheep.* When herbage is scarce, as in mountainous, and sterile regions, these kinds of sheep may prove profitable; I am however, decidedly in favor of our own improved fine wooled sheep. The same necessity does not exist with us, as here, to raise sheep for their carcass only, and it is of no consequence whether the sheep mature at three, four, or five years. Wool with us, must be the first consideration. Though I am satisfied that we can have not only good wool but good carcass also. At any rate it is of the very first importance to us as a nation, that we raise our own wool, both fine and coarse. The only way that coarse-wooled sheep can be made profitable with us, is for the small farmer, who keeps from 20 to 50 or 60 sheep. By taking good care of his ewes, providing them with plenty of roots, and good warm shelter, he might manage to have his lambs drop early in winter, perhaps in January. By that means they would come into the market early in the season and thus command a very high price. I should only use the long-wooled and large sheep, when early maturity, and large size are the two great requisites. Of the long-wooled kinds, I prefer the Cotswold to all others. By far the largest number of the sheep in the market were of the long-wooled breed, being grades from crosses with the Cotswold and Liecester.

They have almost as great a variety of hogs here as we have at home. I have seen some hundreds, indeed thousands in Ireland, and the Provincial markets, but a small number of them were pure Berkshires. The Irish Grazier is a very good hog, when it had been crossed with the Berkshire it was a very fine animal preferable to the full blood of either. I think from all I have seen, that the Berkshires are not large enough for our use, as I have rarely seen them keep up to the size of those I have seen in the breeders pen. For the purpose of crossing with the common hog I consider the Berkshires invaluable. They do not generally make their pork as fat as is the custom with us. In Ireland in particular the hogs brought to market were generally what we should call light pork, although Pat feeds his pig better than he does his family.

Of their horses, I have seen but two kinds that I think would be at all useful to us. The coach horse which is seen in most perfection in Yorkshire, is a fine animal, and a judicious selection I have no doubt would improve our breed. I have seen some very fine specimens of the cart horse and if properly crossed with our lighter mares, the result would be a very useful animal by giving them more size, and bottom. I have seen some very fine animals the result of a cross with the large Pennsylvania horse, and the common mare. I do not see why a cross with the English cart horse which is not so bulky as the Dutch horse, would not produce quite as desirable a breed. The experiment merely is worthy of a trial. It sems to me if our New England farmers would turn their attention to breeding horses they might produce a very hardy valuable animal. Let them but get the right kind, and my word for it, a New England horse would always command the highest price in the market.

---

*We believe the majority of British authority on this subject deny any admixture of a foriegn cross on the original South Down, in the splendid examples afforded of that breed at the present day. Eds.

Of the improved methods of cultvation I have not now time to speak, but may perhaps at another day if I have not already occupied too much space in your paper.

Sincerely yours, T. C. Peters.

Agriculture in Wisconsin.

We here introduce a capital letter from George Reed Esquire of Milwaukie Wisconsin; and although we cannot comply with his particular request, to give him a *written* communication, we shall send him our paper, which we hope will do the society, of which he is an efficient organ, some benefit. In the progress of our publication he will find his queries particulary answered.

Milwaukie 14*th February* 1842.

Dear Sir.—Knowing that you feel a lively interest in any measure that tends to the advancement of agriculture, and the promotion of the interests of the cultivators of the soil in this *western* country, as well as in your own state; it gives me much pleasure to inform you that we have recently organized a "Territorial Agricultural Society," the constitution and proceedings of which I herewith send you.

I view this as one of the most important steps that could be taken to improve the condition, and promote the happiness of those who are engaged in the various pursuits of agriculture, and I believe that it will be regarded by those who shall succeed us in this delightful occupation, as one of the brightest eras in the history of Wisconsin.

Why cannot this society do as much for Wisconsin as similar societies have done for New England and the Empire State? There agriculture as a science, and as an art, has been carried to great perfection; and is not their eminence in this respect attributable in a great degree to these societies?

To them—the East—we must look for example and guidance. We can in a short time learn the results of their experience for many years past; and if we but profit by that experience, our progress in agricultural improvements will be two fold more rapid than theirs has been.

The object of this letter is to solicit communications from you upon the subject of agriculture, with which you are known to be familiar in all its various branches. I believe however that your attention has been more particularly directed to the improvement of stock—cattle and hogs. I notice that you have recently retured from England, bringing with you some of the finest animals that could be selected in that country.

You will allow me to direct your notice to the subject of our resolution, adopted by our Society, "that essays be solicited on the various breeds of swine and those best adapted to the country, and the best mode of raising and fattening the same." This is a subject in which our farmers feel a deep interest, as pork is becoming one of the staple productions of this country. Little has yet been done to improve our breeds of swine; the Berkshire and Lecistershire have been introduced, it being the practice here to let our hogs run at large, the Hoosier seems determined to *root* out all other breeds. Three years ago, when this country was very sparsly populated, and *wolves* plenty, the Hoosier was the best breed that could be obtained; They are good *fighters* and could usually defend themselves when attacked by the *wolves*; if however likely to to be overcome by a superior force, they would take to their *long legs* and being blessed with good *speed* and *bottom*, always *got safe home*; now we do not seek for such qualities, as they are no longer indispensable. Our circumstances are such that we cannot keep our hogs penned the year round, and bestow upon them that attention your farmers do; but we let them run out till late in the fall *to grow* on shucks until we find it convenient to shut them up for fattening.

From your knowledge of the different breeds of hogs and from what I have said of the treatment we bestow upon them, what breed would you recommend as the best to be introduced here? Have you any on hand, and what would be the cost per pair?*

You brought out with you some fine sheep, how do you think the breed would do upon our prairies? Have you any for sale and what is the price per pair? †

---

* The Berkshires, by all means. They are all in all, the best hog with which we are acquainted for general use. Crossed on to the wild Wisconsin brute, they will make quite a tolerable animal. But it would be still better to breed them in their purity.

The price is from twenty to forty dollars a pair according to age and quality.

Respectfully your Obedient Servant,
GEORGE REED,
Corresponding Secratary T. A. S.

A. B. ALLEN, ESQ.,
Buffalo, Erie Co.

The true interests of our Country.

The following communication is from a venerable lady of our acquaintance, the widow of a gallant revolutionary officer; and who, added to her other avocations has been *quite a farmer* in her day. Learning that we were about to establish an agricultural paper, she bade us God's speed, and has kindly contributed her mite of instruction. We gladly introduce it to our readers as a specimen of her zeal for this delightful pursuit, and as a confirmation of Gray's beautiful sentiment that, " E'en in our ashes live our wonted fires."

GENTLEMEN,—Having once been a farmer and always a patriot, it gives me pleasure to learn that there are some among us who feel disposed to promote the true intesest of their country, by drawing the attention, of some of our numerous population from their visionary plans of speculation, to the more sure and happy employment of agriculture.

It seems a little suprising, that, while almost every art and science have found their way into a newspaper, the farming interest has been so long neglected, especially as it is by experience alone that any considerable improvement can be made in perfecting that pleasing and profitable employment; and in no way can an interchange of views, and knowledge gained by experience, be so properly and easily communicated as in an agricultural newspaper.

In contemplating the subject, I find it difficult to confine myself to any one object, when so vast a field lies open before me; the *peculiar location* of our country, evidently *indicates*, that Providence designed that we should be a *distinct* and *independent* Nation; seperate as we are from the other parts of the world by vast bodies of water. Blessed with a varied and fertile soil, lying under every degree of latitude, favorable to the culture of every production necessary to the supply of our luxuries as well as necessities, with various and exhaustless mineral productions of the earth from the necessary articles of Coal and Iron, to the precious metals, including all the varieties discovered in the Eastern World, nothing appears wanting to us to carry out the design of Providence, but a proper application and direction to the labors of a numerous and increasing population, who are naturally ambitious, industrious and inventive, with spirits honest and free. For these results, Providence appears to have been preparing them, the last twenty or thirty years, in various ways, especially by the impulse given to their *inventive* faculties, calculated to hasten the improvement of the vast field before them.

Among the many improvements made in machinery for every kind of manufactures,that for the use of the farmer, is but little inferior; and it appears to have changed the character of the occupation, making the business rather a profitable amusement than a laborious task.*

In view of those multiplied blessings, my mind involuntarily turns back to the time when the little band of Pilgrims left their native land, and like father Abraham, "not knowing whither they went," but guided by that *unerring* Hand which never moves without *design;* landed on the shores of America, where imagination paints them, as receiving the commands given to our first Parents,—" go multiply, replenish the Earth, and subdue it." They did accordingly, and as long as the command was adhered to, they were a prosperous and happy people. But " longing for the flesh pots of Egypt," they sought intercourse with other nations—excited the jealousy of their old oppressors, whose exertions *drove* them to *resistance*, *which* to the eye of reason appeared madness; but to the eye of *Faith*, " *all* things are possible," they trusted in the promises and succeeded; so that the deed of *gift* to the parents, was confirmed by *will* to their children, evidently with the design of making them a distinct and independent Nation. But disregarding the intimation, they were *left* to themselves; or to use the Scripture language, " they were left to their own delusions." and hastening to be rich, they ran into vain speculations. until they brought their country into a state of bankruptcy, both in a pecuniary and moral point of view.

" But as the wrath of man shall praise him," may not this folly, be made the means of turning the deluded people from the error of their ways, to the more rational and happy employment of agriculture?

Although I have wandered far from the point where I started, I have not forgotten the *Agricultural Newspaper*, or the pleasure I have taken in looking over the leaves of other similar papers, although at too late a period to profit by them. Having been a practical farmer, I felt much interest in the improvements now making, and although I practised pretty much on the old plan, I thought it a delightful employment, and one which made good compensation for my labor, even when every kind of produce was much cheaper than now; and every thing done by hand, instead of the machinery now in use. Notwithstanding I labored under some disadvantage, I made some improvements; I was the first to introduce Plaster of Paris in the town where I lived, and the effect it produced on a sandy soil astouished all who saw it. I was the first to *dismiss* the *long eared* hogs; I raised the best calves, and had the best cows by selecting the short-legged and broad-hipped for milk; and having some knowlesge of chemistry, I made an improvement in churning, so that I got good *yellow* butter in the hottest weather; and having a few mulberry trees in my garden, I raised for experiment a few hundred silkworms, although I had never seen one, and made a very great improvement in the manner of winding their cocoons; also some on raising bees, all of which it will give me pleasure to communicate in the proper season. *

---

† The Southdown sheep brought out from England by one of the editors were to fill a special order. When the cultivated grasses are introdeced into the prairies we have no doubt these sheep will thrive upon them. Their value depends much on their quality. Twenty five to one hundred dollars, per head, is the price generally asked in America.

* We must assure our venerable friend, that the wheels of farming are not to be set in motion by " raising the gate, or letting on the steam " quite yet. Though the improvements in various matters, hav largely facilitated the farmer's operations, and added much to his profits, when judiciously applied, the greater part of the labor still remains to be done by hand.

In short, if I can do anything to promote the legitimate design of Providence, I should feel that I was fulfilling an essential duty to my country.

Your Friend, Octogenaria.
Black Rock 10*th March* 1842.

Franklin House, New York,
March 14, 1842.

Dear Sir,

I was induced to go to the "Bull's head" this morning, and examine the Beef Cattle, after a *close* "*handling*" of those in the Smithfield market, for the purpose of comparing the two markets, but I found it a harder task than I expected. It is *impossible* to describe the difference, unless to those who have some knowledge of each. I would have given much to have had the whole of them transported into England just as they appeared, and the best graziers in the midst of them.

I will venture to say, there were not more than eight of the whole number that would have sold at any price, and those I found obtained fifty per cent over the others. The whole of them looked like working oxen just ready for the grazier, but the moment his *hand* had gone through them, he would have been *off* to another fair; the quality would not do for profit. Mr. Townsend, of New Haven, sold to Mr. Montgomery, a yoke of oxen for $600, for which he deserves much credit; the beef sold from eighteen to twenty five cents per lb.

I could say much on this subject but the farmers would think me exagerating for my own interest, were I to state "*positive facts.*"

Yours truly,
Wm. Hy. Southam.

R. L. Allen, Esq.,
36 *Park Row.*

We admit with pleasure the remarks of our correspondent above, on the important subject of our cattle market. We too, took a stroll over "the Bull's head" premises, recently, and must acknowledge our chagrin at the exhibition we there witnessed, of what *should* be "fat cattle." We speak within bounds when we say, there was not *one animal in twenty* properly fitted for the shambles. Nor were they better suited to the *stall* than to the butcher. Many of them are not only, not fit for beef, but incapable under any circumstances of being made into beef of a desirable kind; their unfitness for this important object, consisting in a radical deficiency of form and constitution, which totally incapacitates them from feeding with any profit to the grazier, or acceptance to the consumer. The rearing of such cattle is a sad loss to our farmers, and we would gladly aid them in avoiding it. And we here make them a fair offer. If they will attentively read what we may have to say on the subject of cattle within the coming five years, *and carefully practice* on our suggestions, we will ensure them at the end of that time, with but comparatively a moderate expense, a race of animals that shall return their owners, twice the amount of money for the food and attention bestowed, they now receive for their mongrel herds. We saw cattle there of the improved races, that commanded readily ten cents per lb., while many of the others were well sold at from five to six cents, and the best beef was made at the least expense, pound for pound.* The farmer, therefore, who raises the best cattle, receives more than twice as much as the owner of the inferior ones, for what costs him the same. Nor is this a difference made to suit the whim or fancy of the purchaser. The butcher makes more money out of the best, and the consumer who buys of him, gets more value for the price paid than if he bought the inferior quality. There is an actual, and in the aggregate, a vast loss to the country in rearing these uncouth brutes, and we hope the light, that is now penetrating the country in every direction, from our Agricultural papers, will ere long effect a change that will add materially to the profit of our stock raisers. We have not room to add more at this time, but shall hereafter as occasion offers, comment fully on this subject.

---

* We can assure our friend, we shall receive most cordially all the communications she may favor us with for the public. Though her early improvements are probably embraced in those of modern times, yet the spirit that induced these efforts and the perseverance that crowned them, are what we especially desire to inculcate upon our readers. It is a habit of close and careful observation, and the application of whatever is suggested by their own minds together with what they may find in agricultural papers suited to their own wants, that makes the wide difference between the good and indifferent Farmer.

* We dont mean to be understood as saying that thoroughly stall fed beef is as cheaply made as grazing or imperfectly grain fed animals are, but that owing to the superior fattening properties of the improved animals we saw, they were made at no greater expense than the poorer bullocks, taking the aggregate outlay of rearing from the calf, as in any stage of their existence, there was a saving in the former over the latter.

American Institute Premium Reports.

We subjoin some extracts from the manuscript reports of the American Institute of this city, on the exhibitions of products of American art, from statements offered at their Annual Fair, October, 1841.

SILK. "It is a subject of regret that among the large number of silk growers who are now producing the raw material in considerable quantities, the competitors should be so few in number. They however, take great pleasure in stating that some very handsome and interesting specimens have been exhibited at the present fair, and indulge a hope that the number may be greatly increased in time to come, for there is no doubt but a much larger assortment could easily have been sent to the Fair from the different sections of our country where attention has been devoted to the producing the raw material and manufacturing it into sewings, hosiery, shawls, handkerchiefs, dress patterns, vestings, velvets, &c. &c. which your committee is informed is now done to considerable extent in the United States. The silk business seems to have obtained a footing here. It is satisfactorily ascertained that it can be conducted so as to afford females and children, who from their situation are incapable of performing hard labor, an easy, pleasant, and profitable employment.

One of the specimens offered for exhibition has afforded great satisfaction. It was produced by two ladies, who, at an actual expense of $100.15, have the past season produced a crop worth nearly $500, beside the state bounty, (50 cts. pr lb.) which, it is understood, is sufficient to pay all the expenses of production, besides the interest on the investment of $1000 for land, trees and cocoonery. Some other fine specimens were also exhibited."

SILK MACHINE.—Dr. Thomas White, of Tennessee, received a premium for a silk machine of which the committee speak as follows.

"It is made to execute several distinct operations in the process of manufacture, at one and the same time, carrying forward the same from the cocoon to the well-formed threads fit for the loom or sewing purposes.

Its construction is of the most simple form and made of cheap materials, and can be furnished at small expense to the user, by a class of mechanics found in great numbers in any part of the United States, and therefore conveniently open to the acquisition of all who may desire it. A system of reels is made to transfer the silk from one stage to another, avoiding the trouble of spooling or throwing, as well as the liability to break from tanglement of threads. By the simultaneous action of all the several parts and processes, the silk reeler will have produced an article of thread, instead of "reeled raw silk," in nearly the same time he would have produced the latter, had that process been the only one performed; the amount of *power* to propel the whole being so small as to offer no objection to its use by feeble persons.

Regarding this branch of American enterprise as one of the highest importance, your committee solicit for this machine the most profound attention, and recommend an award of the highest honor to be bestowed upon it, and beg leave to add in the present state of the art for which this machine is a branch, your committee regard that class of machines which are calculated to advance the raw material in the hands of the *growers* to the nearest stage of approach to completion for the consumer, best calculated to promote the early, profitable, and general embarkation of the people of the United States in the culture and manufacture of silk, and submit the following reasons as the foundation of their opinions," &c. &c.

"The STEAM EXCAVATOR," originally invented by Wm. S. Otis, for the purpose of excavating earth for canals, roads, &c., received the following high commendation from the intelligent committee appointed to report upon it.

"It is calculated to do the work of 150 men. Allowing for stoppages, &c., one minute is sufficient to load a car containing 1 1-2 cubic yards. This would give 900 cubic yards per day of 10 hours.

The interest on the cost, wear and tear, labor &c., is $13 50 per day, which if we call $20 per day, gives us the labor of 150 men for less than 14 cents per day each. The steam engine by which it is moved is 14 horse power, and is easily managed by two men. It works well in clay, sand, gravel, and all soils. Being placed upon a car, its position is easily changed, and advances or recedes in the manner of a locomotive as the case may require."

Here follows a more particular description which we have not room to subjoin.

"STEPHEN YATE'S PROCESS OF MAKING CHEESE. In the making of cheese in the ordinary way practised by the dairymen of Herkimer Co., I discovered that when the milk was scalded, an oil would rise on the top and run off in the whey. I directed my dairyman not to scald the curd, and found I not only retained the aromatic oil, but also all the cream that would otherwise escape in the whey, and I kept the cheese in press for some days, (occasionally turning them,) until the linen wrapper was no longer moist. After this they were attended to in the usual way, except that they were rubbed with hog's lard instead of whey butter.

The cows supplying the milk had access at all times to good running water. The presses I used were the invention of Nathan Loomis, late of Montgomery Co. N. Y., now at Fairfax Co., Va., and cost only $4 each."

—

"SIXTEEN ACRES OF CABBAGES, planted on the farm of Lambert Wyckoff by Peter Walsh in Bushwick, Kings Co., produced 61,120 heads which sold for $2,434 77.

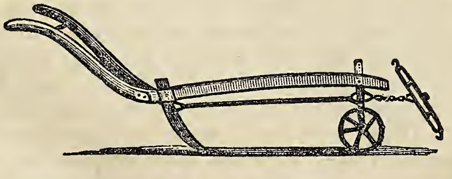
The sod was turned over in the fall and cross ploughed in the spring. Fifty cart loads of street manure from New York city was put on an acre, at a cost delivered on the farm, of 40 cents per load, and the whole cost of cultivation $10 per acre."

—

CULTIVATED CRANBERRIES were exhibited by S. Bates, Billingham, Norfolk Co., Mass. grown on his own land. He states that "low meadow land is best for them, prepared in the first instance in the same manner as for grain. The wild cranberry is transplanted into this in rows 20 inches apart. At first they require a slight hoeing, afterwards they spread and cover the field, producing crops annually thereafter without further culture. In this condition they produce much larger and finer fruit than in their wild state, the yield being from 200 to 300 bushels per acre, worth on an average in the Boston market at least one dollar per bushel. A damp soil, or when wet predominated, has generally been considered necessary, but Mr. Bates thinks this not essential to their successful cultivation; any soil unless when inclined to bake will answer. Early in the spring is the best time for transplanting."

SELECTIONS.

The following cut represents a sub-soil plough, containing three essential requisites for the small farm; cheapness, simplicity, and the small power or team required to work it, most of those introduced requiring six to eight horses to break up the ground. There is a great amount of land in this country that would be vastly benefited by the liberal use of such a plough. The intelligent correspondent of the Royal Agricultural Journal of England, Mr. Charles Gabell, in submitting it says:



The tool, of which I enclose a sketch, I work with two stout carriage horses; it goes, when required, 18 *inches deep.* It does not, of course, stir the soil so much as those before invented, having no fin, nor will it move *very* large stones; but it easily breaks the crust formed by the sole of the plough, and makes it pervious to the air and water. Having only two horses, I used it last spring after the harrow, first with the furrow, and then across and diagonally. It completely loosend the soil, and appeared effectually to prepare it for Belgian carrots, which are a good crop. I have also used it as a subturf-plough, and think it still better calculated for that work. My crop appeared much increased; and I hope this season to subturf most of the grass-land on my little farm. Those farmers who have seen it think it a useful implement.

We intended to have given several valuable extracts on the cultivation of vegetables and fruit trees, but find our original matter will occupy nearly all the room in this number. We however subjoin some general remarks on the preparation of the soils and seeds for the kitchen garden, from the practice of the Shakers, and intend in the next number, to give a complete manual for the cultivation of the particular plants it usually contains.

Before commencing the work of the garden, a few matters essential to success should be particularly attended to. In laying out a garden of an oblong form, it will be generally found most convenient to have the rows of vegetables run length-wise of the garden, so that the plow or cultivator may run through freely, without interruption, allowing an alley at each end for the horse and plow to turn round upon. The ground should be plowed or dug to a good depth, especially for long rooted plants, and be well incorporated with rotten manure or rich compost. The essential advantage of deep plowing is not only best calculated to give room for the roots to expand freely, but the crops on a deep plowed soil will be much less liable to injury from the extremes of wet and dry weather. Every garden should have a good supply of well rotted manure or old compost, ready for use when wanted; also a portion of soot, tobacco dust, ashes and lime, for the purpose of scattering over seed beds and hills of plants in dry weather, to destroy insects, which often cut off the young plants as fast as they come up.

The next matter of importance is, to work the ground and put in the seed when it is in proper order to receive it. A light, sandy soil will be benefited by working it when rather moist, as this will have a tendency to make it more compact, and better adapted to retain its moisture; but if a clay soil be worked when too wet, it will become hard and stiff, and not only prevent the seeds from rising freely, but materially injure the plants in their subsequent growth. Rolling or pressing the earth over the seeds, will tend greatly to promote their vegetation, especially when the soil is loose and dry; but when moist and heavy, if done at all, it should be done very lightly.

If the ground be very dry at the time of sowing, let the seed be soaked a few hours in water strongly impregnated with sulphur or soot, and keep the ground moist by frequent watering. This will have a great tendency to forward the vegetation and prevent the ravages of insects.

Transplanting is generally attended with the best success when performed immediately after the ground has been newly plowed or dug; as it will then work light, and the moisture arising from newly stirred ground is highly beneficial to the growth of young plants. If the soil of the bed be dry when the plants are to be taken out of it, let it be watered freely, and then raise up the plants carefully with a trowel, or a flat pointed stick; and before setting them out, dip the roots into a mixture of rich mould or rotten manure and water, with the addition of a little lime or ashes, and reduced to the consistence of thick whitewash. This preparation is found highly beneficial to the young plants of cabbage, turnips, and others when transplanted, by promoting their growth and preventing their roots from being injured by destructive insects.—In setting young plants, the earth should be pressed a little over the roots, and raised around the stem, sufficient to support the plant, and prevent it from falling or leaning aside. The ground should be stirred often, and kept loose and light by frequent hoeing through the season.

A good garden, well supplied with useful vegetables, in a healthy, thriving state, kept neat and clean from weeds, affords a striking evidence that the cultivator posesses a good portion of wisdom and economy.

The numerous benefits afforded to a family from a well cultivated garden are too little considered by many of our country farmers, for their own interest and the health and prosperity of their families. The cheap and healthy varieties which may be furnished, (much less expensive, and far more healthy than the same quantity of meat without vegetables,) the pleasing and healthy exercise and enjoyment attending their cultivation is beyond description: indeed the cultivation and produce of a good garden are the life and health of a family, upon every principle of rational enjoyment and temporal economy.

The following Receipts were handed us by a Lady whose own experience fully justifies their insertion.

Drop Cakes.—One quart of milk, large tea-spoon full of Saleratus dissolved in a cup of cream; to which stir in flour very smoothly until a thick batter. Then dip your spoon in milk and with it place your batter at short distances in a buttered pan. Very *delicate* made entirely of cream, either with or without eggs.

Buckwheat Cakes are less tough and not as liable to sour, when mixed with *salt-rising* instead of hop yeast.

Soft Gingerbread, very nice.—Four tea cups of flour, two cups of molasses, half-a-cup of butter, two cups of buttermilk, a cup of thick cream, three eggs, table spoonful of ginger, and the same of saleratus. Mix them all together with the exception of buttermilk, in which the saleratus must be dissolved and then added to the rest. It must not stand long before being sent to bake.

Butter is improved by working the second time after the lapse of twenty four hours, when the salt is dissolved, and the watery particles can be entirely removed.

To prepare a round of fresh beef for boiling.—Put the beef in a dish of sufficient size, and add water enough to cover the lower part of the meat. Then put a quantity of salt on the top. In a few hours it becomes well seasoned, and when thoroughly boiled, makes a most palatable dish.

To boil a Ham.—Receipt from an old Housekeeper.

Put your ham into the pot at noon the day before you want it for the table, and keep the water hot until that time, then let it boil fifteen minutes.

Sausages, quite rich enough for an Epicure. Thirty lbs. of chopped meat, eight ozs. of fine salt, two and a half ozs. of pepper, two tea cups of sage, and one and a half cups of sweet marjoram passed through a fine sieve. For the latter, thyme and summer savory can be substituted if preferred.

For roasting Venison.—A large haunch will require three hours. After it is on the spit, rub it all over with butter, baste with flour and a little salt, butter a sheet of white paper, and lay over the fat part fastening it on with strings or skewers, keep it well basted, and five minutes before sending it to the table take off the paper, dust flour over it and baste it with butter till the fat is handsomely browned and covered with a good froth.

Magnesia, if you have not French chalk, will effectually remove grease spots from silk, on rubbing it in well, and after standing awhile, apply a piece of soft brown paper to the wrong side on which press a warm iron gently, and what grease is not absorbed by the paper, can be removed by washing the spot carefully with cold water.

NOTICES OF NEW WORKS.

Lectures on Agricultural Chemistry and Geology, by J. F. W. Johnston, M. A. &c. Fellow of the Geological Society, &c., &c., New York, Wiley and Putnam, 1842.

The volume before us contains the first eight lectures of a course, and completes the first division of the subject relating "to the *organic elements* and parts of plants, the nature and sources of these elements, and an explanation of the mode in which they become converted into the substance of plants."

We hail the reprint of these valuable lectures, by an American press, with sincere pleasure, affording as they do one of the most simple, clear, and accurate compends on the subject embraced by the author, that have yet been given to the public. It is comparatively but a short time since those very practical sciences, Chemistry and Geology, have been applied to the aid and improvement of Agriculture, Sir Humphrey Davy being the first great name, that gave method and utility and popularity to this application. Since then, others have appeared with equal ability and more success, from the accumulation of more experience and further developments of principles. Among these, perhaps Chaptal and Liebig are the most conspicuous. This work however, is in advance of any thing that has yet appeared on this subject, being more plain, full, and accurate than any of its predecessors, and correcting many of their misapprehensions. We hope to see it in the hands of every farmer, and to afford them an opportunity of judging somewhat of its merits, we shall from time to time give such extracts from it, as will be most applicable to the wants of our readers.

A Dictionary of Arts, Manufactures, and Mines, containing a clear exposition of their practice, by Audrew Ure, M. D., F. R. S., &c., &c., &c., illustrated with 1240 engravings on wood. From the second London edition. New York, La Roy Sunderland, 138 Fulton-street, 1842.

The above work is issued in numbers of sixty four pages each, with covers, embellished with well executed engravings, at 25 cents each. Twenty one numbers to be issued semi-monthly, will complete the work, the first three of which have been published. The paper is good and the typographical execution unexceptionable. This work is an old and valued acquaintance, though never before, we believe, published in this country. It has long been considered a standard work in England. It is throughout practical, being based on experiments of the learned author, or such as have passed under his own observation. Though intended for the arts in their more general sense, it is yet in many of its definitions and details, suited to the wants of the Agriculturists, especially such as are disposed to investigate closely, the relations and bearings of the science of Agriculture in its fullest extent. Its principles, too, are applicable to every condition of it, one of the first articles being *acetic acid*, which is so largely abundant in vegetables, and constitutes the sour principle of vinegar. Artesian wells, beer, bread, &c. are fully treated in these first numbers, and have a direct and intimate connexion with the domestic economy of every housekeeper. We are sure the enterprising publisher will be well rewarded in this undertaking. We shall expect to see his design carried out, in "giving to the public a volume devoted especially to the mechanic arts, manufactures, &c., of this country," and beg leave to suggest to him that it will add greatly to the value and interest of it, by interspersing it liberally with the elucidation of Agricultural principles.

Fourth Report of the Ariculture of Massachusetts, by Henry Colman, Comr. for the Agl. survey of the state, 1841. The old Bay state is largely indepted to her indefatigable and intelligent commissioner, (and we may add the country at large,) for the four successive reports he has made under her authority. We especially like one thing, *par eminence*, in the information he offers to the public; *it is based on facts.* Nothing but the tape rule, the scales, or the measure, will answer his views when available. He is too thorough-going a Yankee, to *guess* any-thing but what he is *certain* of. Had we more of such *guessers*, we should have fewer principles *in nubibus* than we now have. We like to see every thing reduced to as near certainty, as the nature of the ease will admit. We shall take an early opportunity of spreading some extracts from his valuable work before our readers.

We acknowledge the receipt from Hon. Henry L. Ellsworth, of his annual report as Commissioner of Patents, with other documents containing much valuable agricultural information. Few men are doing more for the husbandman than Mr. E. His zeal in collecting and distributing information is surpassed by that of no one in this country. The Agricultural statistics of the U. States in this number of our work, emanates from his office.

We have also the pleasure to acknowledge the receipt of a valuable report on *Water Rotted Hemp*, with other valuable papers from Hon. Millard Fillmore, M. C.

REVIEW OF THE MARKET.

Prices Current in New York, March 24, 1842.

ASHES, Pots, per 100 lb.	$6 37½	to	6 50
Pearls, do.	5 50	..	5 62½
BEESWAX, Yellow, per lb.	30	..	31¼
COTTON, Louisiana, do.	5½	..	11
Upland, do.	5	..	9¾
Florida, do.	5	..	9
Alabama, do.	6¼	..	10¾
FEATHERS, American, live, per lb.	33	..	40
FLAX, American, per lb.	7½	..	8
FLOUR, Northern and Western, per bbl.	6 12½	..	6 31¼
Southern, per bbl.	5 81¼	..	6 00
RYE, per bbl.	3 25	..	3 62
MEAL, Corn, per bbl.	3 00	..	3 12½
do. per hhd.	14 50	..	15 25
WHEAT, Western, per bushel,	1 25	..	1 35
Southern, do.	1 20	..	1 25
RYE, Northern, per bushel,	60	..	62½
CORN, do. do.	60	..	63
Southern, do.	56	..	58
BARLEY, per bushel,	73	..	75
OATS, Northern, per bushel,	48	..	50
Southern, do.	43	..	46
PEAS, Black eyed, do.	50	..	75
Small white, do.	90	..	1 00
Green, do.	1 12	..	1 15
Marrowfat, for seed, per bushel,	1 40	..	1 50
BEANS, White, per bushel,	1 00	..	1 25
CLOVER SEED, per lb.	7½	..	8½
TIMOTHY SEED, per tierce of 7 bu.	16 00	..	17 00
FLAX SEED, rough, do. do.	10 50	..	11 00
clean, do. do.	12 00	..	
RICE, per 100 lb.	2 37½	..	3 62½
HEMP, Russia, per ton,	235 00	..	240 00
American, do.	—	..	—
HOPS, first sort, per lb.	12½	..	14
LEAD, Pig, per lb.	3¾	..	4
Sheet and Bar, per lb.	5¼	..	6
OIL, Linseed, American, per gal.	90	..	97
PLASTER OF PARIS, first quality, per ton,	2 50	..	2 62
BEEF, Mess, per bbl.	7 25	..	8 00
Prime, do.	4 00	..	4 75
Cargo, do.	2 75	..	3 00
PORK, Mess, do.	7 12½	..	9 00
Prime, do.	5 25	..	7 25
LARD, City, per lb.	5½	..	6½
Western, per lb.	4	..	5½
BUTTER, best Table, per lb.	18	..	23
Western, good, per lb.	11	..	15
common to good, do.	9	..	11
Shipping, do.	6	..	8
CHEESE, in bozes and casks, per lb.	7	..	9
HAMS, Smoked, per lb.	6½	..	7½
Pickled, do.	4	..	4½
BEEF, Smoked, do.	4	..	6½
SALT, Peters & Beebee, Liverpool stoved ground, for butter in sacks of 28 lbs.	40	..	50
SUGAR, New Orleans, per lb.	3	..	5½
TOBACCO, Virginia, do.	3	..	6
Kentucky, do.	3	..	6½
TALLOW, American, do.	6½	..	8
WOOL, American Saxony fleece, per lb.	40	..	45
Full blood Merino do. do.	35	..	37½
Half to three-fourths do. do.	30	..	33
Native to half do. do.	18	.	26
SHEEP PELTS, each,	35	..	80
FAT CATTLE, per 100 lbs.	4 50	.	7 50
Do. SHEEP, each,	2 00	..	8 00
Do. HOGS, scarce, per 100 lbs.	5 50	.	6 50
HAY, unpacked, per 100 lbs.	87½	..	95
APPLES, per bbl.	2 00	..	3 50
POTATOES, plenty, best, per bushel,	25		
EGGS, per 100,	1 00		

Remarks.

The Market is uncommonly dull, and our quotations may generally be considered as the outside, as no large lots could be sold at those rates.

Corn Market. The demand continued limited for all articles under this head except Wheat, which is taken for export as fast as it arrives. There has been some demand during the past week for flour for export, and some 2,000 or 3,000 barrels have changed hands at our quotations, which has given a firmer tone to the Market. The season having gone by for sowing, the demand for clover seed has fallen off, and prices are only nominal.

Provision Market. The stock of all kinds of Provisions is very large and constantly accumulating. There is no prospect of any immediate change for the better. It is barely possible prices may be maintained where they are, but we should not be surprised if they receded from their already ruinously low price.

Our last advices from Europe do not speak very favorable for any demand from abroad.

AGRICULTURAL STATISTICS OF THE U. STATES,

BEING AN ABSTRACT OF THE CENSUS RETURNS FOR THE YEAR 1839, MADE BY THE COMMISSIONER OF PATENTS.

	Popuat'n	wheat-bu	barley--b	oats—bush	rye—bush	buckw't.	Ind. Corn.	Potatoes.	Hay--tons	silk--lbs	sugar—lbs.
MAINE - - - - - -	501,973	987,412	360,267	1,119,425	143,458	53,020	988,549	10,912,821	713,285	527	263,592
NEW-HAMPSHIRE - - -	284,574	426,816	125,964	1,312,127	317,418	106,301	191,275	6,573,405	505,217	692	169,519
MASSACHUSETTS - - -	737,699	189,571	157,903	1,276,491	509,205	91,273	1,905,273	4,947,805	617,663	198,432	496,341
RHODE ISLAND - - -	108,830	3,407	69,139	188,668	37,973	3,276	471,022	1,003,170	69,381	745	55
CONNECTICUT - - -	309,978	95,090	31,594	1,431,454	805,222	334,008	1,521,191	3,002,142	497,204	93,611	56,372
VERMONT - - - -	291,948	512,461	55,243	2,601,425	241,061	231,122	1,167,219	9,112,008	921,379	5,684	5,119,264
NEW-YORK - - - - -	2,428,921	12,309,041	2,301,041	21,896,205	2,723,241	2,325,911	11,441,256	30,617,009	3,472,118	3,425	11,102,070
NEW-JERSEY - - - -	373,306	919,043	13,009	3,745,061	1,908,984	1,007,340	5,134,366	2,486,482	401,833	3,116	67
PENNSYLVANIA - - -	1,724,033	12,872,219	203,858	20,872,591	6,942,643	2,485,132	14,969,472	9,747 343	2,004,162	17,324	2,894,016
DELAWARE - - - - -	78,085	317,105	5,119	937,105	35,162	13,127	2,164,507	213,090	25,007	2,963	
MARYLAND - - - - -	470,019	3,747,652	3,773	2,827,365	671,420	80,966	6,998,124	827,363	87,351	5,677	39,892
VIRGINIA - - - - -	1,239,797	10,010,105	83,025	10,962,108	1,317,574	297,109	33,987,255	2,889,265	367,602	5,341	1,557,206
NORTH CAROLINA - -	753,419	2,183,026	4,208	3,832,729	256,765	18,469	24,116,253	3,131,086	111,571	4,929	8,924
SOUTH CAROLINA - -	594,398	963,162	3,794	1,374,562	49,064	85	14,987,474	2,713,425	25,729	4,792	31,461
GEORGIA - - - - -	691,392	1,991,162	12,897	1,525,623	64,723	542	21,749,227	1,644,235	17,507	5,185	357,611
ALABAMA - - - - -	590,756	869,554	7,941	1,476,670	55,558	60	21,594,354	1,793,773	15,358	4,902	10,650
MISSISSIPPI - - - -	375,651	305,091	1,784	697,235	11,978	69	5,985,724	1,705,461	604	158	127
LOUISIANA - - - - -	352,411	67		109,425	1,897		6,224,147	872,563	26,711	881	88,189,315
TENNESSEE - - - - -	829,210	4,873,584	5,197	7,457,818	322,579	19,145	46,285,359	2,018,632	33,106	5,724	275,557
KENTUCKY - - - - -	779,828	4,096,113	16,860	6,825,974	1,652,108	9,669	40,787,120	1,279,519	90,360	3,405	1,409,172
OHIO - - - - - - -	1,519,467	17,979,647	245,905	15,995,112	854,191	666,541	35,452,161	6,004,183	1,112,651	6,278	7,109,423
INDIANA - - - - -	685,866	5,282,864	33,618	6,606,086	162,026	56,371	33,195,108	1,830,952	1,213,634	495	3,914,184
ILLINOIS - - - - -	476,183	4,026,187	102,926	6,964,410	114,656	69,549	23,424,474	2,633,156	214,411	2,345	415,756
MISSOURI - - - - -	383,102	1,110,542	11,515	2,580,641	72,144	17,135	19,725,146	815,259	57,204	169	327,165
ARKANSAS - - - - -	97,574	2,132,030	950	236,941	7,772	110	6,039,450	367,010	695	171	2,147
MICHIGAN - - - - -	212,267	2,896,721	151,263	2,915,102	42,306	127,504	3,058,290	2,911,507	141,525	984	1,894,372
FLORIDA TERRITORY -	54,477	624	50	13,561	320		694,205	271,105	1,045	376	269,146
WISKONSAN TERRITORY -	30,945	297,541	14,529	511,527	2,342	13,525	521,244	454,819	35,603	25	147,816
IOWA TERRITORY - -	43,112	234,115	1,342	301,498	4,675	7,873	1,547,215	261,306	19,745		51,425
DISTRICT OF COLUMBIA -	43,712	10,105	317	12,694	5,009	312	43,725	43,725	1,449	916	
Total - - -	17,069,453	91,642,957	5,024,731	130,607,623	19,333,474	7,953,544	387,380,185	113,183,619	12,804,705	379,272	126,164,644

	tobac.—lbs	cotton-lbs.	Rice--lbs.	wool—lbs	Horses.*	Cattle.	Sheep.	Swine.	Orchard.	dairy-val.	furniture
MAINE - - - - - -	75			1,465,551	59,208	327,255	649,264	117,386	$149,384	$1,496,902	$804,397
NEW-HAMPSHIRE - - -	264			1,260,517	43,892	275,562	617,390	121,671	239,979	1,638,543	538,303
MASSACHUSETTS - - -	87,955			941,906	61,484	282,574	378,226	143,221	389,177	2,373,299	231,942
RHODE ISLAND - - -	454			183,830	8,024	36,891	90,146	30,659	32,098	223,229	51,180
CONNECTICUT - - -	547,694			889,870	34,650	238,650	403,462	131,961	296,232	1,376,534	226,162
VERMONT - - - - -	710			3,699,235	62,402	384,341	1,681,819	203,800	213,944	2,008,737	674,548
NEW-YORK - - - - -	984			9,845,295	474,543	1,911,244	5,118,777	1,900,065	1,701,935	10,496,021	4,636,547
NEW-JERSEY - - - -	2,566			397,207	70,502	220,202	219,285	261,443	464,006	1,328.032	201,625
PENNSYLVANIA - - -	415,908			3,048,564	365,129	1,172,665	1,767,620	1,503,964	618,179	3,187,292	1,303,093
DELAWARE - - - - -	365	352		64,404	14,421	53,883	39,247	74,228	28,211	113,828	62,116
MARYLAND - - - - -	26,152,810	5,484		488,201	92,220	225,714	257,922	416,943	105,740	457,466	176,050
VIRGINIA - - - - -	79,450,192	2,402,117	3,084	2,538,374	326,438	1,024,148	1,293,772	1,992,155	705,765	1,480,488	2,441,672
NORTH CAROLINA - -	20,026,830	34,437,581	3,324,132	625,044	166,608	617,371	538,279	1,649,716	386,006	674,349	1,413,242
SOUTH CAROLINA - -	69,524	43,927,171	66,897,244	299,170	129,921	572,608	232,981	878,532	52,275	577,810	930,703
GEORGIA - - - - -	175,411	116,514,211	13,417,209	371,303	157,540	884,414	267,107	1,457,755	156,122	605,172	1,467,630
ALABAMA - - - - -	286,976	84,854,118	156,469	220,353	143,147	668,018	163,243	1,423,873	55,240	265,200	1,656,119
MISSISSIPPI - - - -	155,307	148,504,395	861,711	175,196	109,227	623,197	128,367	1,001,209	14,458	359,585	682,945
LOUISIANA - - - - -	129,517	112,511,263	3,765,541	49,283	99,838	381,248	98,072	323,220	11,769	153,069	65,190
TENNESSEE - - - - -	35,168,040	20,872,433	8,455	1,060,332	341,409	822,851	741,593	2,926,607	367,105	472,141	2,886,661
KENTUCKY - - - - -	55,678,674	607,456	16,848	1,786,847	395,853	787,098	1,008,240	2,310,533	434,935	931,363	2,622,462
OHIO - - - - - - -	6,486,164			3,685,315	430,527	1,217,874	2.028,401	2,099,746	475,271	1,848,869	1,853,937
INDIANA - - - - -	2,375,365	165		1,237,919	241,036	619,980	675,982	1,623,608	110,055	742,269	1,289,802
ILLINOIS - - - - -	863,623	196 231	598	650,007	199,235	626,274	395,672	1,495,254	126,756	428,175	993,567
MISSOURI - - - - -	10,749,454	132,109	65	562,265	196,032	433,875	348,018	1,271,161	90,878	100,432	1,149,544
ARKANSAS - - - - -	185,548	7,038,186	5,987	64,943	51,472	188,786	42,151	393,058	10,680	59,205	489,750
MICHIGAN - - - - -	2,249			153,375	30,144	185,190	99,618	295,890	16,075	301,052	113,955
FLORIDA TERRITORY -	74,963	6,009,201	495,625	7,285	12,043	118,081	7,198	92,680	1,035	23,094	20,205
WISKONSAN TERRITORY -	311			6,777	5,735	30,269	3,462	51,383	57	35,677	12,567
IOWA TERRITORY - -	9,616			23,039	10,794	38,049	15,354	104.899	50	23,609	25,966
DISTRICT OF COLUMBIA -	59,578			707	2.145	3,274	706	4,673	3,507	5,566	1,500
Total - - -	240.187.118	578.008.473	88.952,968	35,802.114	4.335,669	14,971,586	19.311,374	26,301,293	7,256,904	33,787,008	29,023.380

---

* This column contains both Horses and *Mules*.

We have placed the above table in our paper, as affording valuable information to our readers, and as a convenient reference hereafter in treating of the products of the different States. It is proper, however, to remark, that some of these returns are not strictly accurate, but as they are the only data we shall have from the GENERAL GOVERNMENT for the ensuing ten years, we can only regard the official returns that may be made under the sanction of the STATE authorities previous to taking the next general census, as a correction of the above.

Beets as a field crop.—We shall give in our next number, two important articles on the cultivation of Beets, and their value as compared with the Ruta Baga for feeding stock. Some experiments made by Earl Spencer sixteen years ago, showed a very decided superiority of the Beet over the Turnip for this purpose, and they were so carefully varied and conducted, as scarcely to admit of cavil or dispute. As strongly corroborating this result, we annex an analysis of Sir H. Davy of the two species of roots. In 1,000 parts there were of

Species.	Mucilage or Starch.	Saccharine matter or Sugar.	Gluten or Albumen	Extract.	Total Soluble or Nutritive Matter.
Swedish turnips	9	51	2	2	64
White turnip	7	34	1	—	42
Mangold-wurzel	13	119	4	—	136
Orange-globe	25¾	106¾	1¼	—	133¾
Sugar-beet	17¾	126¾	1¼	1	146¾

It will be seen by the above, that *each of the three varieties of Beet subjected to this test contained more than twice as much nutritive matter as the Sweeds, and more than three times as much as the white turnip.* These are important facts if affirmed in this country, and especially as the latter are liable to so many enemies, as to render the crop in most seasons a very uncertain one. At least such is our experience, for though we have never failed in obtaining a *good crop* of Beets, when the seed was perfect, we have scarcely ever succeeded in a good crop of Turnips. We partially remedied their destruction from the fly last season, by soaking the seed in Tanner's oil, two or three days previous to sowing, and then rolling in plaster.

☞Several advertisements were received too late for insertion in this number. They should hereafter be sent in previous to the 20th of the month.

Contents of this number.

Editorial.

Terms—Prospectus for the Am. Agricultural Mag.—Introduction - - - - - - 1
Testimony of Am. Institute—Form of our sheet—Our location - - - - - - 2
Object of Am. Agriculturist—To correspondents—Selections in seeds - - - - 3
Address of Hon. J. M. Garnett, Prest. Nat. Agl. Soc.—Importation of stock - - - - 4
To stock breeders—Notice to subscribers—Ever-bearing Raspberry - - - - - - 5
Cheap food—To prevent depredations of hawks—Agency for purchase of stock, &c.—Protection of Sheep - - - - - - 6
Geology applied to Agriculture - - - 7
New uses of tallow, lard, castor oil, and corn 8
Tour in England. No. 1 - - - - 9-13

Correspondence.

Western Prairies - - - - - 14-15
Grass lands - - - - - - 16-17
Trees and shrubs - - - - - - 18-19
Indian corn for soiling - - - - - - - 20
History of the bull Washington, with a portrait 21-22
English farm stock - - - - - - 23
Enquiries from Wisconsin Agricultural Soc. - 24
The spirit of Agricultural improvement - 25
Visit to the "Bull's Head" - - - - 26
Am. Institute premium reports - - - 27

Selections.

Sub-soil Plough—Preparation of Kitchen Garden 28
Original Receipts - - - - - - - - 29
Review of new books and publications—Review of the market - - - - - - 30
Table of Agricultural statistics - - - 31

GARDEN SEEDS

Can be obtained at all times fresh and of the best quality, at the "GENERAL SHAKER DEPOT," 96 John St. New York. Farmers and Gardeners wishing to obtain Seeds, can depend upon purchasing first rate Seeds, raised and prepared for market, in the most careful manner, by the Shakers. Orders addressed to T. R. HIBBARD, 96 John Street, will meet with prompt attention.

Also, always on hand, wholesale and retail, Herbs, Extracts, Brooms, Sieves, Diaper, Thread, Silk Gloves, old Cheese, and generally all articles raised and manufactured by the Shakers.

BERKSHIRE PIGS.

A few pair of choice Berkshires, out of late importations, can be supplied after the 15th of May, delivered in New York city at $25 to $50 per pair; or on board steamboats at Buffalo, N. Y. at $20 to $40 per pair, two to four months old; price to depend on age and selection

China Pigs as above, $15 to $25 per pair.

Address either in Buffalo or New York, according to the place required for delivery.

New York, April, 1842. A. B. ALLEN.

PETERS & BEEBEE,

PRODUCE COMMISSION MERCHANTS AND SHIPPING AGENTS,

31 *Water St.*; 117 *Liberty St.*

T. C. PETERS. New York. J. W. BEEBEE.

One of the firm recently visited Europe for the purpose of becoming thoroughly acquainted with the method of preparing provisions for foreign markets, and to make arrangements with provision dealers in the large cities, to receive and sell any produce sent by us, on the best terms, and to keep us constantly advised of the state of the markets abroad.

Our arrangements are such now both at home and abroad, as afford us great facilities for disposing of all kinds of country produce at the best advantage.

From our knowledge of the peculiarities of foreign markets, we are enabled to prepare produce for shipping, in the best possible manner—and our warehouse is well calculated for keeping provisions in warm weather.

We shall keep constantly on hand, in small sacks, a superior article of imported Salt, and such as is used by the best dairies abroad, both for butter and cheese. The sacks will contain about 28 pounds, and will be put up under our own inspection, to ensure it against fraud. All kinds of country produce received in exchange, as we are anxious this kind of salt should be used in all dairies.

☞ Liberal advances made on all consignments.

PERIODICALS AND BOOKS,

PUBLISHED BY GEO. A. PETERS,

Brick Church Chapel, 36 Park Row, *fronting the City Hall New York.*

THE AMERICAN BIBLICAL REPOSITORY, devoted to Biblical and General Literature, Theological discussion, the History of Thelogical opinions, &c. Edited by Absalom, Peters. D. D. and Professor J. Holmes Agnew. Published in quarterly numbers, of 250 pages each, beginning with the 1st of January, and constituting two volumes, large octavo, each year. Price, Five Dollars per annum, in advance. The same work printed on smaller paper, is furnished to subscribers at Four Dollars, in advance. To subscribers who take the Repository by mail, and pay postage, the price of the large size is Four Dollars, and of the small size, Three Dollars, in advance. Full sets of back numbers, from January 1st, 1839, at subscription prices.

THE AMERICAN ECLECTIC; (the Literature of the world,) *or Selections from the Periodical Literature of all Foreign Countries;* conducted by A. Peters, D. D. and J. H. Agnew, aided by a number of literary and professional gentlemen. Published in numbers, on the first days of January, March, May, July, September, and November, and constituting two volumes annually, of more than 600 pages each, large octavo. Price, Five Dollars per annum, in advance. To subscribers who take it by mail, Four Dollars. The back numbers for the year 1841, are offered at $2 50 to new subscribers who will pay in advance for the year 1842.

THE PATRIARCH, or Family Library Magazine; designed to define and enforce the doctrines of nature and revelation, which designate the Family, as 1. The great social organization; 2. A primary school of education; 3. A religious institution. Published every alternate month, making six numbers per annum, and a volume of about 300 pages, each number embellished with Engravings. Edited by Rev. R. W. Bailey, William Cutter, and Elihu Burritt. Price, One Dollar, in advance.

In Press, and will shortly be Published, as above,

MORMONISM IN ALL AGES; *or the Rise, Progress, and Causes of Mormonism, with the Biography of its author and founder, Joseph Smith, Jr.* By J. B. Turner, D. C. S., Professor in Illinois College, Jacksonville, Ill. One volume, of about 300 pages. Price, One Dollar. This work has been thoroughly prepared, and exhibits with great clearness the monstrous deceptions practiced by the leaders of a sect, which already professes to number 100,000 adherents in this country, and many in England.

In course of preparation, and will soon be published, as above,

AESTHETICS, or The Elements of Literary Taste. By Rev. Charles B. Hadduck. Professor of Intellectual Philosophy and English Literature in Dartmouth College. This work will be in one volume, and will be especially worthy the attention of professors in colleges and other instructors.

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthy, the most useful, and the most noble employment of Man.--*Washington.*

Vol. 1. **New-York, May, 1842.** **No. 2.**

A. B. Allen, and R. L. Allen, Editors. [36 PARK-ROW.] Geo. A. Peters, Publisher.

"THE AMERICAN AGRICULTURIST' will be published Monthly, each number to contain thirty two pages, royal octavo.

Terms.--One Dollar per annum payable strictly in advance.

Six Copies will be sent for $5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside.

Twenty five Copies will be sent for $20, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, No. 36, Park Row, New-York.

"The American Agricultural Magazine."

A Work of the above title will be issued from this Office, as soon as a sufficient number of Subscribers shall have been obtained, to justify commencing the publication. It will consist of sixty-four pages monthly, of which the American Agriculturist will constitute a part, embellished with one or more fine engravings in each number, and in the selection from the most enlightened Foreign works, and a more enlarged discussion of matters pertaining to American Agriculture, than can be given in our present columns; it is intended to supply a place for the general Farmer, not afforded by any periodical now published.

Terms.--$3 per annum, payable in advance.

Six or more Copies subscribed for at one time, subject to the same rate of discount as above.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

Payment will in all cases be required in advance.

☞**Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

The Improvement of Home-bred Stock.

As it will be the object of the American Agriculturist to confer the greatest benefits on the greatest numbers, to *save* expense to its readers, as well as enable them to make the most out of their capital, to help the poor man and moderate farmer, equally with those of larger property, we shall in this number, point out some of the means which farmers possess for this object, leaving the fuller discussion of the subject to some future time.

We assert that for the achievement of this most desirable object, *every man* has, to a certain extent, the means in his own hands.—We would not be understood to say, that every farmer in the country, can, at his option and without expense, procure the best roadsters or draught horses; or at once secure a herd of short horns, or Devons, or Herefords, or Ayreshires; that he can *will* his old flock of long legged, thin wooled, miserable carcassed sheep into fine merinos, massive Southdowns, or Cotswolds; or his razor-backed, bristly tribe into thorough bred Berkshires—but, that in the exercise of a keen discernment and sound judgment, enlightened by the experience he will find abounding in judicious and practical works on agriculture, and which it will be the great purpose of our work to give and illustrate, he can proceed with greater or less speed, in the accomplishment of an object so desirable to every man. We must except one class, if any such there be, from this remark, of otherwise general application; and none are to be excepted, but such as have breeds already beyond the possibility of further improvement. Great caution on their part, however, is necessary, lest some misstep in their course, jostles them from the pinnacle, and subjects them again to the labor and delay of regaining it. Such must recollect that, " facilis descensus averni," &c., which rendered for our purpose simply is—it is easy enough to go down hill, but hard work to get back again.

Beginning with what is now in the farmers' hands, we say, the first thing for the *permanent* improvement of the constitution and character of stock is, to feed liberally and look well to it, especially while young. We give no countenance to the stuffing system, but on the contrary, we believe the unnatural forcing of any animal destined for breeding, the most pernicious and destructive to its constitution that can be practised; and if the only alternative were perpetual starvation, or perpetual surfeit, we would unhesitatingly prefer the former; and it has another decided advantage in its economy. By liberal feeding, we mean a full supply of such wholesome and nutritious food, as without cloying and loading an animal with fat, will sustain it in a constant and sufficiently rapid growth, and afford an early though not premature development of all its desirable qualities.

To illustrate our meaning, we will say, that the young of all animals are best provided for in the early stages of their existence, by the bountiful provision of nature, afforded in the well filled udders of their healthy and well fed dams. And if from any cause this supply is diminished or withheld, the deficiency must be made up by other and equally nutritious and digestible food. This, with a range, if the season permit, in a fresh pasture, is sufficient till weaned. For colts and calves, we would recommend the addition of a little oat or barley meal, for a short time, to prevent any falling off, which may be continued with the colt, if the farmer can afford it, in addition to all the good hay it will eat, till the grass will afford a plentiful bite in the following spring. The calf and lamb may be supplied with a few roots, besides their hay through the winter, or in place of them, a small allowance of oatmeal, bran, &c. After this, abundant and sweet pasturage for summer and good hay for winter, will suffice to keep the animals advancing steadily towards maturity, though if more rapid growth and larger size be required, the liberal feeder may add occasionally roots or light grain in any moderate quantity, till the animal has acquired its growth. The pig being an omniverous animal, may be allowed a freer range and 'larger liberty' in the variety of his viands, and if restricted in the use of too hearty or solid food, he will be found to thrive apace on even a moderate supply.

During all this time, however, they should be protected from cold and storms, by a warm and effectual shelter, and dry, comfortable beds, and if there be leisure to apply the brush and card, so much the better. No disease should be allowed to fasten on them, to check their growth and impair their organs. These are briefly the general rules to be observed in the rearing and care of the stock, till they are sufficiently advanced to become producers themselves.

We have then another and not less important duty to perform in the *selection* of those designed for breeders. To guide us in this choice, we have the important axiom, observed by all judicious and experienced breeders, viz. "that like begets like;" a rule, which, though not universal in its results, is yet the only one that can be pursued with safety. If we want to procure a good draught horse, we must select parents as near our ideas of what is right as possible. They must be compact, and heavily made; broad in the chest, somewhat projecting over the fore legs; round barrel well ribbed home; a good size bone; plenty of firm muscle; a clean, well coated skin; a good feeder and tractable in his disposition. If a roadster is wanted, we should look for more symmetry and fineness; more grace and elegance; more speed and more spirit. If a saddle horse be required, we can hardly tell you what to do; for there is not one in a thousand that is even a tolerable pad; but if you can find one of the true Arab mould, gentle though gay, spirited though subdued, with a rapid yet easy and delicious gait, half rack and half amble, and all canter, when asked, and bottom enough to sustain his pace; heed not his color or form, his size or his pedigree; but use it as the only means of affording you a chance for a luxury, we are not often indulged with in this latitude. If such an one be not within your reach, content yourself with any thing in your possession that may be adapted to other purposes; your hack or horse of all work, or any thing that will not stumble or sheer, for we hold there is no medium between a very good and very indifferent animal under the saddle—unless one can content himself with a moderate gait, when if a fast walker can be had that will get over the ground at the rate of five miles an hour, a compromise is then offered between ease and speed, and it is for each to decide according to his fancy.

If good working oxen are desired, and Herefords or Devons are not to be procured, as you cannot see the precise form or character in either the bull or cow, select such as in their general conformation, approach nearest the models required; but *much more is to be relied on in using such as belong to good working families.* A form somewhat relieved from the unwieldiness of the more bulky ox, should be selected, with longer legs; lighter carcass; firmer muscle; medium bone; slanting shoulder; well knit withers; broad chest spreading the fore legs well, yet not too deep; ribs well arched immediately behind the shoulders, affording ample room for the heart and lungs to play, and reaching well back and near the hips; a broad level back; and most especially a fine open countenance, with as much intelligence, and as kindly disposition as possible. Such an animal with proper attention and feed, will nearly come up to the horse in capacity and endurance, and when loosed from the yoke, will fatten kindly and pay the grazier as generously as the ploughman. The Devon and Hereford and their crosses, though unequalled for the yoke, are not surpassed for grazing and the shambles, If cows are wanted for the dairy, *look to a good milking race on both sides.* This is not less important in the male than the female. His maternal ancestry, should throughout possess this quality. The cow, besides affording a large supply of rich milk, should exhibit as nearly as possible, certain developments of form, as being much more likely to have received her character through her descent, and more probably securing its perpetuation in her progeny. The color with some is paramount. Red, and nothing but red, will answer for their complexion; but while we allow a partiality for this color, and deny that it can be bettered, we must acknowledge we have seen choice milkers of almost every hue. Red, though in our opinion desirable, is not absolutely essential. But she should have a long, though light head; a clear placid eye; a long thin ear; small, waxy, tapering horns; or no horns at all, (for we never saw a polled, or hornless cow, that was not a good milker; though the Galloways are denied this character;) a thin, slender neck; without dewlap; full chest; clean, straight legs; light before and heavy behind; tail well set on, long and tapering; broad, level back; large, well developed milking veins; large udder and radiating teats, (standing or pointing out from the bag;) fine hair, and soft mellow skin; as little offal as possible; good constitution; hardy; quiet in the pasture; and mild and pleasant in her disposition. If you have a good breed, indigenous to the soil, possessing these qualities to a great degree, be cautious of changing, *for nothing is of more importance to stock than to be adapted to soil and climate.* There is an adaptation in size and character when judiciously managed, insensibly acquired by all kinds of stock for their peculiar location and feed, and injuries have been sustained by hasty innovations, that years have hardly rectified. Most of the short horns afford a valuable cross for the dairy where the pastures are abundant, though there are some exceptions among them as milkers; but with scant herbage and indifferent fodder, smaller hardy animals "to the manor born," whose ancestry for generations have been inured to privation, are unquestionably to be preferred.

If the object is exclusively to raise beef, in early maturity, great size, just proportions and beautiful symmetry, with a rapid and economical conversion of vegetable into animal food, the short horns cannot be surpassed. The great size and short legs of this valuable breed are, however, impediments to his safe and easy conveyance to market, and when an economical transportation is not afforded to those remote from it; a cross giving more length of leg without impairing the fatting qualities may be found peculiarly desirable. This can be effected by both the Herefords and Devons, and without any sacrifice of fatting properties; and where the feed is occasionally short, perhaps either the last mentioned would be a proper substitute for the Durham.

If sheep are the objects of improvement, the first thing to consider is, what we most desire in them; a heavy carcass, rich and juicy for the table, with indifferent or medium wool; or small carcass and a choice fleece. If the latter, we must look to the Merino and Saxon alone, as affording it; but in the selection of such, particular regard should be had to a sound, healthy constitution. It is a mistaken opinion, unfortunately practised to the loss of thousands, that a fine wooled sheep is necessarily a tender one. Whoever practises on this theory, practises to an unnecessary loss. The Merinos have been brought to perfection on the cold mountains of Spain with an average latitude of the State of New-York; and the silken wooled Saxons have attained their unrivalled excellence in latitude 51°, under the chilling influence of the Erzeberg snows. And further, if a sickly or delicate constitution is the *necessary* appendage of a fine fleece, we should unhesitatingly say, abandon them altogether. Imperfection and disease in the animal frame, are only to be tolerated in man; nor scarcely then, but where the electric fire of genius blazes so intensely, that the vessel which supplies the oil is hidden by the flame. But we shall show in some subsequent number that the finest wool can cover a good carcass and a sound one too.

If a larger animal is required, affording a large though medium quality of fleece, it is afforded in the South Down. In this invaluable variety, every thing but the Merino or Saxon coat can be found. If desirable still further to enlarge the carcass and lengthen the wool at the expense of its fineness; we must look to the Cotswold, the Lincolnshire and the Bakewell; but care must be taken, if these last breeds are selected, that the feed be lengthened and thickened, and a larger range provided, for they cannot be sustained on the penurious pastures, that would afford the former an abundant supply. In breeding from either of the above, we must reject all such as have large offal; and if we must have horns at all, let them be as small as possible; head small and pointed; ears thin and not too large; tapering neck of moderate length, firmly set into the chest, which, as in all the preceding animals, must be wide, deep and projecting; broad and level back; round, plump and smooth throughout; legs standing wide and straight and but of moderate length; and the skin mellow and elastic. With such a form, we are sure to find a good constitution and rapid tendency to fat.

Need we describe the pig? The characteristics of what every body keeps should be universally known: and there are few who have not well noted the difference between the easy, gentle, quiet feeder, and the roaming, restless, thriftless gormandizer. The first is a pleasant appendage to every gentleman's or poor man's stock; the last ought to be driven beyond the Mississippi with the wolf and catamount tribe, as their worthy co-plunderers of the products of civilized life. The pig, then, should have a short, fine snout; an eye that will not look you out of countenance—nothing of the vermillion hue; a mouse ear we prefer; (though others that prefer large size may be compelled to take a flop ear with it;) a light jowl; a short neck; capacious chest; broad back, a little crowning if very long, or perfectly level if very short; belly well let down; legs short and standing on the toes; broad and deep hams; tail small and well set up, with a kink or two in it; little hair and no bristles; a soft handler; quiet habits; and any color you please. He should mature early, and fatten at any age between nine and eighteen months; eat moderately, and convert into pork on equitable shares whatever food he takes; returning as near one-fourth in weight as possible when nutritious, or if coarser and lighter, as much as he can afford.

To all this, the farmer may say, this is a very plausible theory, and we are willing to concede it may be true enough, but unfortunately we are beyond the reach of such improvement; our neighbors have not this fine stock, nor have we the means to go abroad and procure it. Well, then, gentlemen, we will advise you what to do. For your breeders use the very best animals you have or can procure, and if access to a male stock animal of the right kind can be had, don't button up your pockets when the price is stated, but pay liberally. Every penny thus expended, is seed wheat scattered on a fertile soil that in a few months will return you ten or twenty fold. And when your young stock is produced, don't sell your best filley because she will bring a few dollars more than an indifferent one; or work her till superannuated, and breed from some crazy jade, because she is fit for nothing else. Don't take your best calf to the butcher and raise the others because they are worthless to him; but save your best, *your very best* heifer, and if your neighbors have not a better bull than your best cow affords, save that for use, though his carcass should be worthless when you have done with him, which it is not.

If your sheep are of the common kinds, any of the improved rams will benefit them, but do not attempt mixing the improved breeds, unless you are a skilful and experienced breeder. They have been brought to their present perfection only by careful and judicious crossing. An unlucky cross may unsettle this nice adjustment, and from two races eminent in their own peculiar excellence, you may get a third with most of the faults and scarcely any of the merits of either. The points of a highly improved breed are like the well balanced elements in a chemical compound, that are brought together and sustained by their just proportions, scientifically arranged; if another element be presented or an excess of what is already held in combination, a disturbing principle is afforded, that by its attraction, resolves the elements into new and mischievous combinations, that successive generations may be required to re-establish. But no danger need be apprehended by crossing on to an indifferent stock—it might be difficult to make it worse, and there are ninety-nine chances in a hundred that it will be made better.

It is no reasonable objection to the ambitious though circumscribed farmer, that he cannot proceed so rapidly in his improvements if limited to selections not embracing the choicest breeds; or confined to crossing as his sole means of advancement. Whoever considers the immense difference between the various races of domestic stock, originally, and not remotely, perhaps, deriving their existence from the same head, will be struck with the rapid deterioration or improvement, resulting in a few generations from two opposite modes of treatment. As an apt illustration of the effect of food, climate and management, we would point to the English carriage and cart horses, and the Shetland pony—the Short horns, and the Kyloe and Kerry cattle—the Downs and Cotswolds and their meagre, misshapen progenitors—the improved pig every where, and the wolfish character of the wild boar acquired in two or three generations, when driven into the forests and abandoned to himself. But we need not further particularize, as every intelligent and observing farmer will find abundant illustrations if his range of observation be sufficiently extensive.

R

Manure. Put on your land all the manure that can be scraped from your premises, or that you are entitled to from the road. Leave not a particle in the barn yard. It matters not how coarse or long it is, if you can plough it in. All you get from it before another season is clear gain, for it will lose but little more under the ground with a crop over it, than exposed to the action of the sun and rains in the yard. If it cannot be used, place it in heaps and cover two feet thick with earth, which will inhale and retain most of its enriching gases till wanted.

Plaster of Paris.

Gents.—We have neard many complaints among our farmers who use this important stimulant, and particularly from those who have but recently commenced its application, that it failed in numerous instances last year in developing its usual benefits. They doubt the goodness of the article, or its adaptation to their soils.

Our solution to their complaints and inquiries is, that it requires rains to dissolve or decompose the plaster, without which its application to crops is fruitless. The spring and summer of 1841 were unusually dry throughout a great part of the Northern States. For two or three months, we had little or no rains, and the grass, and early grain crops were uncommonly short. This we apprehend is the principal cause of the failure. We advise our agricultural friends, however, to repeat their regular course, and soon the present season may give a good account of the last year's application. At all events, our confidence is in no way impaired in the virtue of this stimulant.

Yours truly, F.

As the application of Sulphate of Lime, more familiarly known as *Selenite*, *Gypsum*, or ***Plaster of Paris***, is extensively and most beneficially made in this country as a manure, perhaps we cannot occupy the attention of our readers more advantageously, than by throwing together some *facts* connected with it. Of *theories*, we have many; but as they have not yet attained that certainty which we deem essential to any subject claiming the attention of practical farmers, the rule we have adopted for our present limits, will not allow our communicating them. The materials of gypsum, are lime, chemically combined with *sulphuric acid;* commonly known as *oil of vitriol*, or *vitriolic acid;* which is one of the strongest mineral acids, and consists of sulphur and oxygen, with the addition of a little water. This combination is essential to be understood by such as are making experiments on its use, and will serve to throw much light on the *reasons* for the different results obtained.

And, 1º It generally has little or no effect on strong clay lands; unless applied in large quantities, say 15 or 20 bushels to the acre, when it has been known to change the character of a stiff clay in a single season, to a loose, friable, mellow and rich soil.

2º It is used with great effect on dry, sandy, (not a barren sand,) or loamy soils.

3º One to two bushels per acre, is considered a sufficient quantity to apply at once, though as high as six, have been sown with marked advantage.

4º Its effects last through two seasons, and frequently much longer.

5º It should be sown generally in April or May; (and always applied when the ground is dry,) thus affording an opportunity for dissolving it by the rains. Its application to crops as late as June, have frequently been attended with decided advantages, though the large quantity of water required for dissolving it, being about 500 parts of water, at a temperature of 60° to one of gypsum, renders the advantage much more conspicuous when sown earlier.

6º The effects are much more striking when applied with manure, and sometimes with lime.

7º It is a stimulant, as well as manure, and has a tendency to exhaust the humus or geine already in the ground, which renders it necessary to add manures occasionally, when the crops are carried off the ground; when they are consumed on it, the soil is constantly improving without the addition of manure.

8º It is in some instances a *specific* food of vegetables, by this means greatly increasing the quantity of some plants, as clover, sainfoin, and other of the broad leaf grasses; peas, corn, roots, &c.; while some of the narrow leaf grasses, and wheat, barley, oats, &c. are scarcely benefited by it.

9º In opposition to the suggestion of our correspondent, we have well attested experiments of its immediate beneficial effect on crops suffering from drought, before any rains had come to its aid; it having been in some slight degree dissolved by copious dews.

10º Its application in the neighborhood of salt water, has seldom been attended with benefit, owing undoubtedly to its combining with the saline vapor, wafted to it by the sea breezes.

11º Frequent benefit is derived from its use, on vines and other plants infested with insects, for though the diluted acid constituting a portion of it, may be highly beneficial to the vegetable, it is poison to the insect.

12º Wet lands are not improved by it.

13º Many soils are already so highly charged with gypsum in their natural condition, as to derive no benefit from an additional quantity. There is scarcely any saline substance more generally diffused, it constituting a portion of almost every soil, and is contained to a greater or less extent, in all river and spring water; and giving to the latter especially, when in considerable quantity, the character of ***hardness***.

From this cause, (its general and large diffusion), is unquestionably owing the want of effect on clay lands. These almost invariably contain considerable portions of ***sulphur*** and ***lime;*** we have then but to add a portion of oxygen to the sulphur, which is abundantly found in the soil, and water, and atmosphere, and we have the sulphuric acid, which brought into combination with the lime, gives us the gypsum. This enters directly into the substances of some plants, as we have seen above; and on others, it acts favorably, by its subsequent decomposition, and union with other substances, as potash; and especially by seizing on and fixing the ammonia, brought into contact with it by the dews and rains from the atmosphere. These multifarious operations of nature in her secret laboratory, with all the elements and under all the varied circumstances in which she works, are not so clearly detected, as to develop her modus operandi with sufficient certainty, to establish well defined and accurate theories. We therefore leave the subject for the practical farmer to experiment upon, with what little light we have thrown together on the subject above. And with all the theory in the world, *experience* as to its value to certain crops, under certain circumstances, and on certain soils, would be of more value to the farmer; and to him we must look for such experiments, as can alone afford any reasonable or correct foundation of the theoretic action of this important mineral. We will add, that another reason for the want of effect on clay soils, may be found, in the abundance of the sulphates of ammonia, potash soda, magnesia, alumina, &c. which they contain.

Our own use of gypsum has been limited, as the land we have cultivated for a few years past, has been a tenacious clay. On a field containing twenty acres, which was occupied with oats, sown on a freshly turned and unmanured soil; oats sown on a well manured piece, occupied for several preceding seasons with roots; and a large clover patch; we sowed in the latter part of May last year, about seven acres in different patches, at the rate of five or six pecks to the acre. The ground had become quite dry, and we had but slight rains afterwards, and though the whole season was remarkably dry, we had a large crop from each part of the field, (thus showing the superiority of a clay soil in drought); yet so far as we could discover, there was no apparent difference in the plastered or unplastered portions of the field. There may have been some advantage in the weight or nutritive character of the crop afforded by the plaster, but of this we could not judge, as our experiment did not go far enough to settle this point. R.

A NEW METHOD OF PRODUCING CHOICE TREES.—We have seen the experiment successfully made, of producing young trees by binding around the stalk of a thrifty shoot, fine rich mould, which is kept firmly in its place by cloth or other bandages. This should be sufficiently moist, and applied soon after the buds begin to expand in spring. The bark in contact with the earth, ought to be punctured in several places, which gives facility to the protrusion of the new roots. When these are sufficiently developed, the stalk may be cut off below the earth and set out in a place congenial to its growth. D. J. Browne, Esq., informs us he procured a choice orange plant in this way, in the short space of six weeks, binding the earth around the stem by a single plaintain leaf, and at the expiration of this time it was transferred into a box of finely prepared mould, and brought from Brazil to this country, with the foliage and fruit upon it.

We are not certain this plan would answer for the production of all fruits, but the simplicity and ease with which the experiment can be made, entitle it to a thorough trial. Shall we hear from some of our correspondents the results of this suggestion next fall?

Tour in England. No. 2.

The country in and about Berkshire, is rather a grain, than stock producing district. It is in a high state of cultivation, and one of the most beautiful of the rural counties of England. It is a pleasant variety of hill and dale, and bounded on the north by the Thames, and crossed by the Loddon, the Embona, the Kennet, the Ocks, and other branching rivulets. Its soil is various, with a greater or less admixture of clay, resting occasionally on limestone, but more generally on chalk, interspersed with flint. The vales are mostly alluvial, and quite fertile, especially that of the White Horse up the Ocks, and along the Thames, or rather the Isis, for the names are synonimous here. A few miles below the city of Oxford, the meadows have a width of two to three miles, with a good soil, reminding us strongly of the Sciota bottoms in the neighborhood of Chillicothe, though the latter are by far the most fertile. Lower down the meadows are much narrower, and so liable to overflowing that they are rarely plowed, but kept almost exclusively in grass. The herbage produced here, seemed often watery and coarse, and consequently afforded an ordinary quality of hay, and quite disappointed the expectation we had formed of it, from reading English books.

The Thames, England's mighty river, is here, some thirty to sixty miles above London, from forty to eighty yards wide, half filled with rushes and cat tails, and its water muddy and almost stagnant; and as for its tributaries, the Loddon, &c., we should dignify them in America, with the name of brooks or rivulets. We quite amused a fellow pedestrian, with showing off some of our school boy feats, with a long pole in hand, jumping them back and forth in their narrowest places at a running leap. Osier beds are occasionally planted along the streams, which prove a valuable crop, from the annual cuttings afforded for the basket makers.

The *four course system* generally prevails in this country, which is this:—1° year, plow and manure highly, and plant with potatoes, beets, turnips, parsnips, or carrots. If these can be off the ground sufficiently early, the land is sowed to wheat for the 2° year. If not, the following spring, it is sowed to oats or barley, with some of the grasses, clovers, or Italian rye. 3° year, the grasses are fed off by hurdling sheep on the field, or if cut and fed to cattle, it is again manured, and the 4° year is again sowed to wheat or other grain. It is simply, roots, grain, grass, and grain; a severe system of cropping, requiring a strong soil, and constant manuring to sustain it.

All cannot pursue this system without considerable modification. Sometimes instead of grain, peas and beans follow; vetches* also, winter and spring are sowed, and as soon as the former are fed off, rape† follows, which is again fed, and the field sown to wheat in the fall. Some adopt a five, six, or seven course system, when peas or beans with manure, will follow wheat, and these again followed by wheat or other grain; the lands sowed to grass; this mowed once, and then pastured a year or longer as circumstances require. The curious reader will find this subject treated very extensively in English works on husbandry, but our limits will not permit us to enlarge on this subject. We must here add that owing to the great difference in soil, climate, and prices of labor, and the products of the soil, practices most approved here, must be taken with great modification if adopted in our own country. In the vicinity of our large cities, when manure is abundant, and products high, the four course system may be adopted with great advantage, especially when the owner of the land has a family to employ on it. Under this system, England has doubled her products within a few years, and it is the opinion of many of her scientific farmers, that it may yet be vastly increased; and to effect it, every effort is made to advance her arts of husbandry to the highest standard.

Some of the implements of husbandry in Berkshire are rude and cumbersome in the extreme, especially the two wheeled plow, which is also common to the whole south of England, and notwithstanding the repeated, minute and exact published experiments made by Mr. Pusey, late President of the Royal Agricultural Society, who resides in this county, of the superiority of the lighter swing plows, it is adhered to with a prejudice and pertinacity, really surprising. It is of great length and weight, with a heavy axeltree in front, thick and clumsy almost as that attached to a cart. At each end of this, rolls an unequal wheel, one of a larger diameter than the other, to run in the furrow to keep the axeltree level. To this cumbersome machine, we do not recollect to have ever seen less than three, and frequently four stout cart horses hitched on in line, one before the other, driven by a boy walking along by the side, with a man to hold the plow. Of course in this way, as the hind horse approaches the end of the furrow, he has to do all the work to his great fatigue. The plowing is admirably done, but at what a needless expense.

We frequently conversed with intelligent gentlemen upon the subject of introducing lighter swing plows in the place of the bungling machine now in use among them, but they asked, good naturedly, "What shall we do? the men are accustomed to it and wont change." We replied, educate them to the new mode, or get younger men if the plowmen are too obstinate to adopt it. "Ah, all that may answer in America, but does not do in this part of England." But it does do, we are glad to say, now, to a greater or less degree, and many spirited farmers have entered into Mr. Pusey's views we understand with success. Other implements, such as harrows, scarifiers, cultivators, drills, and threshing machines of a good kind, we found in quite common use.

The farm work is done principally with horses of the large cart breed, which they put into work at three years old, and so keep them on till five or six, during which time they are more than earning their living, while improving in value, when they are taken to London and other parts of the kingdom and sold. In this way many with whom we conversed said that they were more profitable stock than cattle; others disputed this, and preferred oxen, which after working till past six years old, they sold to the graziers, or fatted for beef. The cattle used here for the plow, were mostly a large coarse mixed Devon or Hereford, together with various crosses of other kinds, and when worked they were harnessed to the plow like horses, and not unfrequently wore the blind bridle. For roadsters, they use all kinds, from the thoro-bred with its various crosses, down to little rats of ponies, for children's hobbies, and ladies gigs and phaetons.

---

* *Tares*, (frequently called vetches,) are a species of pea. They are smaller than the common field pea, and either brown or black; the vines growing thicker, with smaller leaves, and never more than two feet high. Sheep are hurdled on them, or they are cut and fed green to cattle, horses and pigs.

† *Rape*, is of the cabbage tribe, but resembles the leaves of the ruta baga, though smaller. The stalk runs up in a spindle and flowers, producing seed much like the turnip. It is cultivated in England, principally to be fed to sheep, when nearly grown; after which it will sprout and furnish another crop. On the Continent, it is cultivated mostly for its seed, which is ground and pressed like flax seed, furnishing a valuable oil. The residuum is ground, and in the form of *rape dust*, is used for manure.

Trefoil and *Sainfoin*, are two kinds of small leaved clovers, which grow very thick, and are sometimes called *French clover*.

The *English Bean*, frequently cultivated in gardens in the United States, a large coarse vegetable growing on large upright stalks two and a half feet high, is in England frequently cultivated as a crop for animals, and yields fifteen to twenty-five bushels per acre.

Cows are not abundant, and are kept mostly for family purposes. They are generally of the Jersey tribe, more or less crossed with the common stock of the country, and now and then a Short Horn with its grades may be found, but these are rare. We saw a few of the old Not sheep remaining, crossed with the South Downs, which adds to their fineness of points, and otherwise greatly improves them. The pure South Downs are kept here also in large numbers, and crossed sometimes with the Cotswold. This they have done in order to increase their size and obtain heavier fleeces, but the mutton of this cross is not so desirable as the pure Down. However, killed as they generally are at one year old, the same objection will not hold against it, as when the animal is longer kept and loads on such a quantity of fat.

If the Downs are in the neighborhood, the sheep are taken out by their shepherds every day during the season to pasture upon them. This change of food and exercise is very beneficial to their health, and every night they are brought home and folded with hurdles, on tares, clover, sain foin, or something of the kind, or it is cut and fed them standing in an adjoining field. An acre of cultivated grass will thus keep a hundred sheep from seven to ten days. In the winter they are folded on the turnip fields, fed a little straw or hay, and allowed to dig the roots for themselves, or as is more generally done by good farmers, the roots are pulled and sliced in machines, and then put into troughs or boxes for the sheep to feed from.

The English winters are totally different from ours, being rainy, foggy, and open, with little sun, high bleak winds, and the ground seldom frozen, and then only slightly; and snow rarely lying more than three or four days after falling. Hogs are kept in the barn-yards or small fields adjacent to the out buildings; and in their season, tares, clover, or any green food is cut and brought home to them to feed on; in addition, they have bran from the mills, brewers grains, and occasionally beans. They are also turned into the grain fields after harvesting to glean them, and in the fall and winter, the fatting process is finished with oats, peas, and barley meal. The cows generally run to to pasture, and all the work stock and frequently the fatting and other animals, are kept up in yards and stables and soiled; the teams returning from the work fields at night, stopping to take loads of fresh cut clover, vetches, or grass for this purpose.

Besides the manure that is made from the farm, large quantities of peat ashes are manufactured in this county; and they import crushed bones, rape dust, guano and other manures, sometimes at the cost of ten to twenty-five dollars per acre. This last outlay per acre is rarely made for manure, and only for particular important improvements. Manure, however, is the English farmer's main dependence to produce good crops, and to obtain it, he is lavish in labor and expense, but in nothing does he more judiciously invest his capital, and from nothing can he look for so sure and profitable a return.

Land lets from five shillings up to five pounds per acre, according to the soil and eligibility of situation. Good average farms command about twenty-five shillings the acre, and the tenant pays the taxes, which run from five to fifteen shillings more, (about ten dollars per acre.) It may be asked how farmers in England can live and pay such enormous rents and taxes—it is easily answered by saying, that all the land they hire is arable, and not as in America one-half or one-fourth wild forest; the great crops they get from a given quantity, and the high prices that they obtain in return for meat, grain, and indeed every thing else they may have for sale. When we were in England, wheat was about two dollars per bushel, and other grain in proportion; while beef, mutton, and pork, commanded from twelve to fourteen cents per pound—so if a tenant hired three hundred acres of land at two guineas per acre, (say ten dollars,) his rent is $5,000. His labor and other expenses may be $2,000 more, making $7,000. He will have at least one hundred acres of wheat, averaging twenty-five bushels per acre, which at two dollars is $5,000. Then his other grain, meat, wool, dairy products, and growth of different kinds of stock are perhaps nearly as much more, leaving him the handsome profit of $3,000. Out of this, he has some family expenses to meet, and interest on his capital employed, for no man can be a tenant in England as a rent farmer to any extent without considerable capital. The above calculation is based upon a fair farm well managed, and a good season.

We frequently saw wheat in Berkshire in large fields, that would average thirty to forty bushels per acre, oats sixty to eighty bushels, and other crops in proportion. Other fields of wheat would not be over fifteen or twenty bushels per acre, but when this was the case, the tenant was considered in the broad road to ruin, and certain it is, owing to the superior care bestowed in the cultivation, lands in Great Britain yield much larger average products than they do in the United States. We neglected to add in the proper place, that labor, clothing, and some other things are about 50 per cent. cheaper in England than in the United States. We may sum up its agriculture by saying, that many things there are worthy of all imitation by us, it is neater, more regular, and more scientific, and notwithstanding the two very adverse seasons of '39 and '40, owing to the indefatigable industry, skill and prudence of the English people, it is in a high state of prosperity. The present year's crop ('41,) was a good average one, though the season was called cold and rainy. The grain grew well and fairly ripened, and the root crops, which are equally if not more important, were never more promising.

The buildings are various, from the immense castellated pile of Windsor, the residence of the Queen, down to the humble hut of clay walls, thatched roof, and earthen or brick floor. But how rural and pretty were many of these last, with trim hedges and gardens around them, and how often have we stopped to gaze with delight at the tidy matron or blooming girl outside, watering the grass plot, trimming up the flowers, or cultivating the fruits and vegetables that always adorned them!

The roads in Berkshire are thoroughly McAdamised, even to the lanes; and the great Western Rail Road passes directly through here from London to Bristol, and is probably the finest in the world. There are several canals here also, which with the slack water navigation of the Thames, create great facilities for travel and transportation.

We found the people wherever we went, friendly and hospitable, and were treated with a kindness and attention there, and, indeed, in all England, that we did not anticipate. The farmers live handsomely, as in our own country, with substantial furniture in the houses, books, engravings, and various knick-knacks floating about—keep their own gigs or pretty spring carts, and a pony chaise for wife and daughters to do their visiting, and take their airings in. They still wear white top boots and drab gaiters a good deal, and the peasantry may be generally seen in frocks, corduroy breeches, gray stockings, and thick, solid hob-nailed boots. They work moderately, and generally have enough to eat and drink, and their clothes are comfortable and appropriate, and some of their cottages absolutely enviable. Occasionally there is partial work for them, and then comes the hated Poor-house, to which they are obliged to resort. We heard many complaints of bastardy and drinking among them, but of these things, the higher ranks would do well to be silent, till they set better examples themselves.

The peasantry are a sturdy race, and some of them would do credit to the roughest bluntness of our backwoodsmen in their speech and manners, while others are somewhat cringing and subservient. Upon the whole they are a free, hearty class, and we took great pleasure in chatting with them on every occasion, and only wished we could transplant about 50,000 of them per annum to our wild, fertile districts in the United States. They would soon get passing rich for them, and become valuable members of the great American family. The women are much out in the fields, hoeing turnips, raking hay, reaping, binding, gleaning, and harvesting the root crops. I liked to see them in haying time: it is clean, light, pretty work, and brought to mind all the poetry of Burns, and the enchanting song-writing of the United Kingdom; and we can assure our readers, that we saw many a "charming, sweet, sonsie lassie" engaged in these rural occupations. They wore neat straw bonnets, and had cloaks and umbrellas to guard against the frequent showers, and to our question as we passed, "Well, girls, this is fine fun, is it not,—the hay harvest?" they blushed and smiled, courtesied and replied, "Yes, your honor," or simply, "Yes, please, when weather's fair." We would very gladly relate many instances of manners and conversations that fell under our observation when abroad, but to avoid the possibility of trespassing in the slightest degree upon private life, we forbear. Perhaps, however, occasional scenes may come in hereafter, when nothing can be risked on this head, or kind hospitality appear to be betrayed.

Markets are held somewhere in the county almost every day in the week, but the largest and most generally attended are those at Newbury and Reading, if we recollect right on Thursdays and Saturdays. Here you will see the farmers in neat, white tops, and drab gaiters, coming in from all quarters in their gigs, spring carts, and on horseback; sturdy peasant men and women on foot with baskets of sundry things in hand, and others with ponies and donkeys, balancing loaded hampers on their backs, while the more wealthy had their quadrupeds harnessed to market wagons, loaded with vegetables, eggs and notions in general, followed up by the huge broad wheeled wagon, to which those of our native country are but cock boats to a frigate, and piled up with sacks of grain about as high as a load of hay. The roads are so smooth and perfect, that immense loads can be drawn upon them, and to this towering vehicle would be attached six large, powerful cart horses, fat as they could walk, and coats as sleek as moles, gaily caparisoned with tassels, top knots and bells, their driver in smart plaited blue frock and breeches, and long pipe stuck into his hat riband by way of ornament, cracking his whip and walking by the side of his team, proud as a turkey cock, and dealing out his orders with as much pomposity and gusto as a militia captain on muster day. Then come droves of pigs, flocks of sheep, cattle, horses, and asses, all bound for their respective stations in the stock and grain markets. Now commences "*high change*," points, breeding, qualities, prices, payments, and all such mighty matters are discussed, and by 2 o'clock, P. M., affairs are pretty well closed.

All then assemble at the different Inns, the more gentlemanly class dining together at a general table. All seated, the chairman takes up a huge carving knife, gives a loud rap on the festive board with the handle as a call to silence, and then with becoming unction, mutters a short grace and all fall to. The dishes are plain and substantial, and amount to three or four kinds well-cooked fish and meats, and then follow plumb pudding and pastry. Wine and spirits are not much drank, as they are very dear in England, but foaming tankards of double distilled strong ale usurp their place in foaming procession. After the cloth is removed, pipes with stems of about a 'cloth-yard' length succeed, and then follow wordy discussions on the day's transactions, crops, stock, rents, tillage, &c. &c.

Column after column of light blue smoke now rises up from each, filling the room with a denseness, quite equal to a genuine English fog. Gradually the eyes of the pertinacious puffers begin to assume a fishy aspect, their cheeks changing with alternate blue and red, seem at last to be bursting with tobacco smoke, florid health, and foaming beer. The busy landlady and her maids are sailing about in every direction, waiting upon customers and serving round the potations, while the landlord more quietly sits at his ease, holding sage talk with all comers and goers. In the tap room the scene is enacted over again in a more humble way, for there sit on long benches, with naked tables before them, small farmers or sturdy peasants, some discussing a dinner of simple bread and cheese, others adding a little cold bacon or lamb to it, while others again are sucking lustily at the beer pots, alternating their "heavy wet," with "light dry" drafts upon the long tobacco pipes. Though never participating in stimulants or opiates of any kind, yet there is a downright comfortable apparent satisfaction in these things, that when occasionally led to look back at them, our sympathies are seized fast hold of, and we cannot but half envy, for the moment, the animal enjoyment of the stupifying indulgences. A.

Relative Value of the different Manures.

To show the extreme care with which Europeans husband their manures, we subjoin a list of some articles systematically collected for this purpose, and their relative fertilising properties. We cannot too earnestly inculcate upon our readers the necessity of the strictest attention to this important subject. Manures are the foundation of the farmer's prosperity. He can do nothing without—he can do every thing with them. Their importance has been hitherto undervalued by a large portion of our countrymen, in consequence of their occupying new lands, which, being charged with the undisturbed remains of vegetable matter accumulated through centuries, need little assistance from art to sustain successive crops, sufficiently large to satisfy the occupant. But we have two remarks to apply to persons cultivating such lands: there is comparatively little land, except the richest of the alluvial bottoms, that cannot be made to increase its crops by manure; and a series of crops will soon exhaust even the best, unless it is subject to a periodical renewal of its fertility, by accessions from alluvial deposites furnished by the overflowing of streams.

A strong example of this is shown in the Virginia lands, which at one time were as rich as any on this Continent, but by severe cropping for a long time, many of them have become so much impoverished, as to be comparatively worthless, and in many cases have been absolutely abandoned. In this condition they will probably remain till exhausted Nature is allowed to recruit herself by the decomposition of such fertilising mineral resources as abound in most soils; and the accumulation of fresh vegetable matter has restored her former energies. But in the interim, the land is abandoned and worthless, and the capital invested in it, totally unproductive. This disastrous result may not only be avoided by a careful application of manures produced on the farm when properly stocked, but the original fertility of the soil be gradually augmented. That we do not mistake this case, it is sufficient to quote recent European experiments in confirmation of our opinion, which show that the urate produced from a single adult in one year, affords nitrogen sufficient to produce 800 lbs of wheat, or over 13 bushels! And this with *all the excrementitious matter* abounding on every farmer's premises, if carefully collected and retained to be applied to the proper crops, and at the proper season, would rapidly increase its productive powers, even while undergoing a severe cropping.—

There is no difficulty under ordinary circumstances, in getting *good crops from good land*, and we shall feel it particularly incumbent on us therefore, to provide our readers most liberally with all information relative to manures.

The following articles have been recently analysed by Boussingault and Payen, with reference to their fertilizing principles as manures; and the figures below indicate the number of pounds respectively, which in their ordinary or moist state contain the equivalent of nitrogen to be found in 1000 lbs of farm yard manure.

		lbs.
	Woollen rags	22
1	Codfish (damaged, washed and pressed)	23
	Feathers	26
	Blood, dry, (insoluble)	26
	Horn raspings	27
	Cow hair	29
	Muscular flesh	30
	Blood, dry, (soluble)	32
	Graves	33
	Pigeon dung	48
2	Bones boiled	57
	Do. fat, (exposed to air)	64
	Do. moist	75
	Linseed cake	76
	Rape cake	81
3	Belloni's poudrette	103
4	Grains of white lupin	114
5	Cockchafers	127
	Blood liquid	140
	Urine of the horse	153
	Pea straw	223
	Buried root of clover	248
	Soot from coal	296
	Wheat straw, being 1-8 from the upper end including the threshed-out ear	300
	Animalized charcoal, (recently prepared with night-soil)	332
	Soot from wood	347
	Wheat chaff, and carrot tops, each	470
	Dung hill drainings	677
	Potatoe haulm, and horse dung, each	727
	Saw dust, oak	740
	Tops of green beet root	800
	Saint foin straw	833
	Urine of the cow	909
	Farm yard manure	1000
	Cow dung and oyster shells, each	1250
	Oat straw	1428
	Saw dust, Acacia	1559
	Wheat straw	1660
	Barley do	1739
	Saw dust, fir	2119
	Rye straw	2352

It must not be supposed that this list indicates, under all circumstances, the value of these manures, even with reference alone to their nitrogen. It is only the analysis of each in certain states, and those states vary materially. Still it affords a good general criterion of comparative value, and may now and then be of some use to the farmer under certain circumstances. When his own farm yard dung is deficient, he may be able to make up from other sources within his reach, some substances which, properly managed, will afford a good substitute for the ordinary supply of the farm.

☞ We have noticed in late Nos. of the Philadelphia Cabinet, that there are some large fowls and large white hogs in Pennsylvania. We should be very happy to have a history of all there, and be informed also of the address of the owners, so that in a jaunt we propose taking through the state, we may be able to call and look at them. Nothing will gratify us more than to be the organ of communication in directing public attention to improved animals of *all kinds*, and we shall esteem them the better for being bred in our own country. All we ask is *the thing*, and be certain it is what it purports to be.

☞ We wish to purchase for some friends, 100 good Merino ewes, 2 years old, of the largest and finest forms, together with 3 superior bucks—also a few Saxons—also 100 grade South Down ewes from 3-4 up to 31-32, (we prefer the highest cross,) to be delivered in the month of September.

We wish also a few very choice grade Short Horn cows, for family use, that are *first rate milkers*. Also 3 *Ayrshires* and some of their crosses approved good milkers.

Address the editors of this paper, in all cases *post-paid*, with prices for *cash* on delivery.

Mode of increasing the Potatoe crop. An English writer says by carefully removing the buds as they appear on the potatoe vines, the crop of large ones is very much augmented. The theory is plausible, and worthy a fair trial.

Soak your Seed Corn in Saltpetre.—It destroys the worm, is not relished by crows or squirrels, and yields much more abundantly than when planted without.

Peach Worm.—L. Physic, of Philadelphia, says a mixture of 1 oz. saltpetre, and 7 oz. salt, applied on the surface of the ground, in contact and around the trunk of a peach tree, 7 years old and upwards, will destroy the worm, prevent the *yellows*, and add much to the product and quality of the fruit. He also sows the orchard with the same mixture, at the rate of two bushels to the acre.—***Phil. Eve. Post.***

---

1 Frequent in Roman Catholic countries.

2 It will be seen that "boiled" give more nitrogen than "moist" or "fat bones." This refers to equal weights. With equal measure the result would probably be the reverse.

3 Poudrette is slowly dried and old night soil.

4 These are absolutely grown for manure on the Tuscan Appenines, whence more bulky crops are not easily transported. Gathered when nearly ripe, their seeds contain nearly all the azotized principle of the plant. They are boiled or baked to destroy vegetation.

5 In the south, where these flies abound, they are collected to prevent the damage done to crops by the grub, in such quantities as to render them available for manure.

The Protection of Home Industry.

We shall offer our readers no apology for the following brief remarks on a subject that vitally concerns *them*, in connection with each of their fellow-citizens. 'Tis in vain we enrich and prepare our ground—in vain that we carefully select our seeds—in vain we apply a skilful and assiduous tillage—in vain that the all-bounteous Deity sends us propitious seasons, and we are suffered to reap luxuriant harvests; if, through the mal-administration of the government, and the unequal intercourse we have with other nations, the very excess of our blessings is but an additional means to weigh us down and depress still further the productions of the soil. We should be recreant to our trust, did we fail to point out equally the best modes for the successful cultivation of the soil, and the means for securing the full enjoyments of this success. Most eminently is this our duty under the republican government we enjoy, which secures the proud privilege to *the citizens themselves*, either directly or by proxy, of prescribing such an administration of affairs as they may deem essential to their interest and prosperity.

The National Convention assembled for the *Protection* of Home Industry, met in this city on the 5th of April, and adjourned, after a sitting of four days. About 400 members were present from a majority of states in the country, out of three times that number appointed, which the busy season of the year and other causes prevented from attending. A mass of facts and statistics relating to the condition of the nation and its business, in the various departments of agriculture, manufactures, and commerce, were elicited, which are well calculated to arouse every patriot throughout this wide-spread Union. No intelligent man, after listening to the reports and debates made on this occasion, could fail to see what has been the cause of our present embarrassments, and the only remedies that can now be applied for removing them. They are clear and palpable as light itself; and " the way-faring man though a fool, need not err therein."

These disastrous times have been brought on us by the combined agency of our local and general governments, and individual operations. The first in these series of errors, was such a reduction in the rate of duties on foreign importations, as to offer an inducement for importations from abroad to an amount far beyond our ability to pay.

The second was the introduction of an extended paper money circulation on a fictitious basis, beyond any thing this or any other country has ever seen since the days of the old " Continental paper."

The third and last great cause which followed as a matter of course from the former, was the neglect of the legitimate occupations of the productive classes, and a too general abandonment by all, of those habits of industry and economy, that are indispensable to a healthy, stable and prosperous condition of a country. The result of the whole matter is, that we are in debt to an enormous extent in Europe, which we are unable at present to pay; we have mutual embarrassment and distrust at home; society, and the occupations of the community are unsettled and disordered; we have yet too many extravagant habits upon us; we are still importing too largely; and we *have no outlet for our agricultural productions*. Every occupation equally participates in this distress. No; we must except one class, the office holders, state, general and municipal, and we may add, our *conscript fathers* also, the legislators of the country. *They* are thriving and prosperous, and while labor and the fruits of labor can be had for half its accustomed price, they are flourishing in all the prosperity of fat offices and undiminished salaries. The man of wealth too, who has his coin securely hoarded, can enjoy his luxuries at half their ordinary cost, and if property be his ambition, a very little of his hoarded stores will buy almost as much as he can grasp. But we are wandering from our subject.

The reports of the Convention embracing almost every subject of American occupation, were clear and luminous, and full of instruction. They were almost invariably based on the relation each bears to the common parent of all, *a well sustained agriculture.* Beginning with the firm and majestic trunk, whose roots reach deep and wide in a luxuriant soil, they followed it up through all its branches to the topmost twig, and showed the expanding fruit, which has drawn almost exclusively from the bounteous fulness of their mother earth.

The great iron business is the *sole product of our soil.* The ore and the fuel are hers alone, and she sustains the labor that shapes and fashions it, almost exclusively on our own productions. So of the various implements and manufactures that are based upon it. Their materials are furnished, and every thing but the *superfluities* of the artizans, if we except the cast steel and a few minor things, from our own productions. 'Tis the same with our woollen and cotton, our silk, hemp, and nearly all our other manufactures. They are furnished directly, and almost exclusively from our soil. It is computed, that to furnish the first, we have 20,000,000 sheep, producing annually over 40,000,000 lbs. of wool, worth $12,000,000. The agricultural capital invested in this stock and the land and fixtures required for their accommodation, is not less than $200,000,000!! The fuel and sustenance, the transportation of the materials, and the manufactured articles, all centre in the soil, and go directly into the hands of the farmers; leaving but a commission to the manufacturer, who has received the materials from the agriculturist, and skilfully and laboriously put them into shape for his future convenience and use. The fisheries too, draw their whole outfit from the farmer. Their anchors and chains, and iron fastenings, and cordage and sails, their timber, paints, oil and provisions, are all directly or indirectly derived from the products of the earth.

But in all these various occupations there has been a blight; they are diseased to the core; and without a speedy remedy, these fair products of American growth must wither and die; and if they fall, it needs no prophet to foresee, our agriculture must be involved in the general ruin. Already our ports are groaning under the surplus productions of our agriculture. We are taking it from one market to another, and eagerly asking, Who will buy? We have more than we want at home, with our present organization of employment, and Europe, that has almost drained our last shilling of specie, in exchange for her silks, and wines, and gew-gaws; sagacious Europe steadily persists in excluding from her ports, all the substantials of life we offer her, in payment or exchange for the miserable trash we have so lavishly bought of her. She is too wily to receive her dues from us in the only way we are able to pay. While she is filling every nook and corner of our country with her wares, with a vigilance that never tires, she is rigid in excluding almost every production of ours; save the cotton which is an indispensable element of her prosperity. And even this she will soon provide for her own consumption, and we shall be left without the privilege of furnishing her a single article essential to her wants. The chairman of the committee on agriculture, Hon. Harmar Denny of Pennsylvania, exhibited returns from our exports from 1790 to 1840, from which it appears that *the exports of beef for the last* 10 *years, was only half what it was for the same period* 50 *years ago! And this too when our cultivated lands have* *trebled, and our producing population has more than quadrupled!* The exportation of pork has somewhat increased, but *the aggregate of beef and pork exported is less than three-fourths its average amount half a century since.*

Of flour exported to England within the last 20 years, the testimony of several of the heaviest dealers in this city, established the fact, that more than two-thirds of the whole shipments during that period, had been disastrous. The *semblance* of relief held out to the American producer by the proposed change of the corn laws of England, is unworthy of our notice. The knowing ones in Parliament, scout the idea that it will, under any other circumstances than the starvation of the country, admit the importation of foreign grain to any amount. They persist in adhering to the "*sliding scale*," which renders the importation of the *staff of life* no better than a gambler's occupation. Thousands of barrels are still held there in bond, which were sent last year from this port, under the delusive temptations of high prices and low duties, but which, even under the meliorating influence of the proposed law, will result in a loss to the American shipper of one to two dollars per barrel? And whenever the necessities of England compel her to admit foreign grain to avoid starvation at home, the market on the Continent, which is always well supplied, can be reached in 36 hours, and returns made in England to *satiety* in a week! What chance then has America of furnishing England with bread?—None, *none whatever*, and the sooner we abandon this delusion the better.

As to our pork market, we could wish we were ignorant of the last and present years' transactions. They are too deeply disastrous to talk of with patience. We cannot state the disheartening losses to their full extent. Suffice it to say, that the farmer who sold his well fed carcasses at 1 1-2 to 2 cts. per lb. last winter in the extreme West, got twice the price they would now bring in any market, after deducting all necessary charges. These are solemn, unvarnished, *incontestible facts*.

How is it with our shipping interest, our commerce, hitherto the pride and boast of our country? That too is faltering. It has stopped in its glorious career, and other nations are fast gaining on us, even in the poor privilege of bringing their own worthless wares to our already overcharged warehouses. Two hundred vessels are now lying rotting at our wharves, their crews discharged, and with not the slightest prospect of employment. And our merchants, how fare they in this scene of almost unmingled disaster? "Othello's occupation's gone" even with them. They are fairly turned out of their own counting rooms, and 'tis with difficulty some of them could get a porter's birth from their foreign masters. The astounding fact has been shown from Custom House and other documents, that over *four-fifths of all the English goods, and eleven-twelfths of all the French and Continental goods sent to this market, are sold by persons owing allegiance to foreign countries, and not naturalized in our own!* They will not pay us even the poor compliment of allowing us a commission on their goods; but they import them in their own ships, store them in their own warehouses, and then hold them out to us with one hand, while they grasp our gold in the other; which is instantly sent back to the governments of the old world, to pamper their already bloated luxuries, and still further augment their strength. To such a length has this system proceeded, that the merchants, and the shippers, have at last, as well as the mechanics and manufacturers, come in solid phalanx, to join the farmers of the country in asking for some relief; a relief, that is now equally demanded by every class in the community. And this brings us to the second division of our subject—*the remedy for our grievances.*

This is ready to our hands—we have only to *will* it, and the siren bands of *Free Trade* (free to all the world as regards the privilege of selling their products to us, and equally free in prohibiting ours from finding a market with them,) that have bound us so long in ignominious bondage, will fall, like Samson's cords, from our limbs. There is but one remedy, but thank Heaven, that is potent for good, and is entirely within our reach. *It is simply, to lay such a duty on all foreign fabrics that we can produce at home, as will afford ample protection* to HOME INDUSTRY. Go to the halls of Congress, and tell them in tones that shall make the deaf to hear, that we will not have AMERICAN LABOR degraded by being placed on a par with the paupers of Europe, who work for 5 to 25 cts. for adults per day; and if possible, even worse than that, the semi-barbarianism of India, at 3 to 10 cts. per day. Tell them, *where there is no reciprocity there shall be no intercourse;* that is, *that intercourse and interchange shall cease at the point where reciprocity and mutual advantage terminates. Give us a "judicious tariff." We ask for no monopoly, but we demand protection.* With this talisman once adopted, every vocation would start at once into new life and vigor; every trade would be resuscitated, and every department of industry again filled; and the now crowded granaries of the farmer would be relieved of its surplus, and his pockets replenished by remunerating prices for what is now unsaleable.

We are not disciples of that school that preach monopoly or would foster one interest of the country at the charge or expense of any other. No such petty view influences our visual organs. But we *do* profess to wish to protect our own countrymen, whether native or adopted, in that reward we think they ought to receive for their persevering and well directed labor. We *do* profess to wish to sustain that, and lift it high above the degrading condition of European and Heathen toil.

We have been prating of currency, currency, currency, till we have reached that point where we have no currency; where we can have none, till we cease to run in debt beyond our means to pay. Heaven has graciously vouchsafed us laws, whose operations, while most benignant, are for the time being, most loudly deprecated. While we had a currency—that is, a circulating medium, whether gold or silver, or Bank paper, stocks, and state and other bonds, and we had them all, and we can any of us tell how much too good they were in public estimation, while they lasted—we were plunging fearfully deep in debt, "where fathom line could never reach." Now we have next to none, little gold or silver, almost as little good Bank paper, and as to stocks and bonds once in such high repute, we think we shall be excused for not classing them as *currency*. The country is groaning under repletion from foreign goods; *abstinence* is the only remedy. Sound legislation, sound sense, and sound habits on the part of this nation, in one word—*temperance* in business matters, would have saved us from this deep disease of the body politic, and their prompt adoption and unflinching exercise, would soon remove it now: but in the mean time, the absence of all money and all credit by restraining importations, is the only present remedy in operation for restoring the ultimate means of affording both. The agriculturists of this country hold three-fourths of the legislative power and at least an equal proportion of sound intelligence, and sterling worth, and a combination of their influence would carry any measure they chose to sustain; but unfortunately, the *cunning* and intrigue of a portion of the remaining fourth, defeats the adoption of much of that policy by which alone they can hope for any security.

Till we can have just and proper National legislation on this subject, we must do what we can individually. Foster and protect and encourage your own manufacturers. Every thousand dollars invested in manufacturing, requires the products from ten thousand invested in agriculture to sustain it. Massachusetts annually buys at a *round price*, from the Western farmer, more flour than the total exportation to England of the same article, which we have shown above, is made at a positive loss. Which then is the best *nation* for the West to trade with, the *English nation* or the *Massachusetts nation?* She gives you a better article for a less price, when she has had *protection* for awhile till she can get fairly into operation with her manufactures, as has been already experienced by her selling a better article of cotton goods now for 8 cts per yard, than was *imported* 30 years ago for *five times* 8 cents. What is true of cotton goods, is also true of many others; and will be of all, if we can have *protection* for awhile. And what is said of Massachusetts may be said of many other states, and your own, perhaps. The *domestic markets* afforded by your own manufacturers are worth all the foreign markets in the world ten times told. Sustain and cherish them; cease to buy from abroad; and with intelligence, economy and industry, the currency will take care of itself. Had we the best in the world at this moment, excessive importation would make it the worst in three years; and starting with the worst now, we predict that adequate protection of our *Home Industry* would make it the best in an equally short period. But we have not room to pursue this subject now, but may recur to other features of it hereafter. R.

☞ We call the attention of our Western readers to the extensive sale of Short Horn or Durham cattle, advertised in our present number, to be sold in Ohio next month. There are 27 in the catalogue. The cows are celebrated for their milking qualities. Lady Ann has given 32 quarts per day for two months in succession; and most of the others will average 24 quarts per day on grass alone, and when not in milk, will fatten kindly, thus uniting two great essentials of cattle excellence. Such cattle for breed, are worth more than their weight in some Bank paper. For crossing on native cattle, they are invaluable. There is no *corner lot* speculation in buying such.

Mr. Mahard's Berkshires are among the best in the country, including some of our recent importations. A few of these, as also some choice Leicester sheep, are held on private sale.

☞ Some good animal cuts we intended for the present number were not prepared in time. They will appear hereafter.

We have an editorial article on the cultivation of Hemp—also, Kentucky farming, which will appear in part in our next number.

GRAPES MAY BE PRESERVED FRESH, by being suspended in any air tight vessel so as to prevent pressing on each other, or by packing in saw-dust in a close jar and placing it in a dry, cool place.

NOTICES OF NEW WORKS.

"*A Muck Manual for Farmers.*—By Samuel L. Dana.—It is usual to help the ground with muck, and likewise to recomfort with muck, put to the roots, but to water it with muck water, which is likely to be more forcible, is not practised.—Bacon." Here is an unpretending title and as quaint a motto. Not so, however, with the treatise. We have a most important, *the most important*, subject of a farmer's attention treated in its general principles by an experienced, ingenious, and reflecting mind. Dr. Dana has been long and favourably known to the agricultural public by his ingenious and practical essays on matters essentially connected with their prosperity. This work will lay them under still deeper obligations to the author. There is much of novel theory in this work, which perhaps extended observation may be required to establish and confirm; but there is also enough of well-authenticated facts, to commend it to the careful consideration of every farmer. The theory, too, will be found attractive to the intelligent and inquiring mind, and will well repay investigation. We shall enrich the columns of the Agriculturist by some of the more practical quotations from it hereafter. We have been especially gratified in the perusal of this work, to witness the devotion of *American genius*, so generally absorbed as it is by professional or political pursuits, to a subject, though eminently practical in its results, yet combining so much of thorough science and pure intellectuality. The work is for sale at Wiley and Putnam's. Broadway.

We acknowledge, also, from the above gentlemen, the receipt from England, by late arrivals, the London Farmer's Magazine, six numbers of C. W. Johnsons Encyclopædia, and a continuation of J. W. F. Johnston's Lectures on Chemistry and Geology as applied to agriculture.

We must also acknowledge the receipt of valuable papers from the Agricultural Press of this country; and our thanks for the complimentary manner in which our humble efforts have been noticed by the press generally. We esteem this the more highly from a conviction *that it has been done from a growing fondness for the subject*, rather than our own deserts.

"*Transactions of the New-Haven Horticultural and N. Haven Co. Agricultural Societies*," have been politely forwarded us by Charles Robinson, Esq. We are always gratified to learn the result of these commendable enterprises, and especially so, when as successful as the reports of the above indicate. We hope, ere long, to see similar societies organized in every county in the United States; active, efficient, exciting agents, giving spirit and success to the efforts of the cultivators of the soil, by calling out and rewarding a well-directed competition. We have only room for a single extract:—

"Of the working oxen, who can speak in terms of too much praise? Nearly six hundred were on the ground; and if any other county, or state, or country, claims to have finer or better, where is it? We are ready for a challenge. The splendid teams of one hundred and seventy each, from Bethany and Woodbridge, collected during the storm, proved conclusively the courage of the farmers there, and their admirable taste in the selection, and skill in rearing and training of stock."

Six hundred premium working oxen, shown from a single county, in a most terrific storm, and that scarcely half represented! and this county affording a large proportion of light soil, and sterile mountain!

Farmers of the prolific south and west, when shall we have as good deeds to record of you? Let those who deny the advantages of oxen for farm labor, attend the N. H. Co. fair, the coming autumn, and witness the ploughing of 34 rods of land (nearly one fourth of an acre) by a single team *in 36 minutes!* This is *distancing* Eclipse and Henry; *yet the Committee think there is room for improvement!* We *infer* this was done by *a single yoke of oxen*, without a driver; but we think there is more room for improvement in the reports of some of the committees than in the ploughing. Pardon us, gentlemen; but you don't give us the particulars above, which we are obliged to conjecture, and we are also in the dark as to the breeds of most of the premium animals, quantities of vegetable products per acre, &c., &c. The mode of raising premium animals and crops ought always to accompany their exhibition, and we can then enforce the precept on the audience with more justice, "Go thou and do likewise." It was in this county the splendid Durham oxen were reared, recently sent to this city by Wm. K. Townsend, Esq.

LADIES' DEPARTMENT.

The Ladies' Department will be added in the subsequent numbers of our work. The flower garden, botany, &c., &c., are as essential for them and their share of the "farm stock," the younglings of the family, as graver matters for the other sex.

Flowers—Their Uses.—Not long since, we had occasion to call on a friend in the country who had retired from the busy throng of the adjoining city, where he had been an active participator in the exciting scenes of its ambitious citizens. Like most others of an ardent temperament and too sanguine expectations, he had been tempted beyond his depth in the recent allurements of the times. He was overwhelmed with the disasters that followed in such rapid and irresistible succession, and with blighted hopes, and sad forebodings of the future, he sat dejected and silent, and buried in the melancholy musings of his own sad spirit. Rather irritatingly repulsed in some topics of consolation I had volunteered to him, I silently withdrew to a retired part of the room, more pained than vexed, that my benevolent intentions had been so rudely repelled; but I deemed it the better philosophy to allow the smouldering fires of discontent to exhaust themselves, rather than by stirring, to kindle them anew. We had not been long sitting thus unsociably, when the sound of merry voices came ringing in our ears, and a moment after in burst a trio, the avant couriers of the boisterous group. The first to reach our melancholy Jacques, were the old family dogs, a large Newfoundlander, beating his shaggy sides with his tail, and pushing his intelligent nose into his master's lap, and a favorite little Terrier bounding all over the room with joy; close behind them, and only in their rear, because he had but two legs to their four, came little Ned, a flourishing younker, of nearly four, whose cheeks, beaming with health, and eyes radiant with delight, were at once unceremoniously thrust into the face of the unhappy man, and claiming a kiss, exclaimed, holding up at the same moment one hand full of wild flowers, the first of the season, and the other grasping divers evergreens, twigs, and switches, for the better discipline of his hobby horse, "See, papa, what I have!"

Before this brief address was fairly out of his mouth, France, a swarthy little Gaul, the babies' maid, came patting in, and sans ceremonie deposited her tottling charge in the father's lap, a rosy little budget of femality of scarcely 18 moons, who smiling her delight, muttered her tiny bits of sentiment as she held a little bouquet of already half demolished Spring beauties, up to his face, soliciting his admiration. Last followed the more sedate, but scarcely less joyous wife and mother, and with a face flushed with her healthful walk, and the excitement of her happy ramble in the balmy breath of spring, she triumphantly held up her glittering prizes of "earth's freshest, fairest flowers." "Only see," says she, "the *variety* I have found together, and so early too;" and drawing a seat close by my friend, she spread the radiant things on her lap, and culling the different species, she exhibited their various characters.

"See this beautiful Hepatica, with its trilobed leaves and quintuple petals most delicately shaded, with every variety of hue, from the purest white, through every shade of pink, and blue, and purple; and frequently on the same cluster. Here is the delicate Anemone, two varieties, both varying from a perfect white to the deepest peach blossom; here is the Viola rotundifolia, and here are the little yellow, and the large blue, Violet. Here is the firm, glossy, mottled leaf of the Erythenium, or Adder's tongue, and the syphon stem, with the yellow bud, that will soon expand into the beautiful, yellow, lily shaped flower, with its modestly curled petals; and here the Sanguinalia, or Bloodroot, with its delicate blossoms of snow, far-famed for its medicinal root; here the wind Anemone, and here the Zephyr flower; and here the little wild Star of Bethlehem, just peeping from the ground; and here is the gaudy Cowslip, more useful in its leaves, which furnishes a most delicate esculent for the table. Smell this exquisite fragrance; 'tis the modest Epigœa repens, or trailing Arbutus, whose little vines, after patient search among the withered autumnal leaves, our little Edward brought me. These are the Trilliums both red and white, not yet expanded; and here the bud of the Mandrake, and here the silver tassels of the Birch, the Alder, two kinds of Swamp-Willow, and here the delicate tiny flowers of the Ash and Maple"— "And here," interrupting her voluble recital, and relaxing the misanthropic scowl he had vainly endeavored to retain, and giving full vent to his softened feelings, extending his arm, and drawing her to himself, "*Here* is Heaven's last best gift, and worth all the world besides; and see what lovely flowers it bears," catching up and half-smothering with kisses his little Bess, that was quietly enjoying the display of flowers, occasionally throwing one to her favorite tabby, that was just then purring round her feet. "I was just trying to make myself believe I was the unhappiest man the wide world contains; because I had lost much I was determined to persuade myself that I had lost all. But here I am surrounded by a wilderness of sweets and comforts, not half of which I can fully enjoy; and,"—he was going on with his confessions, but seeing his fortress of misanthrophy had been taken by storm, and fearing my bachelor feelings would be carried away by his conjugal rhapsodies, I quietly opened the latch beside me, and slipped out of the door to help the little urchin, who had thrown down his late highly prized acquisitions, and was trying to catch a pet rabbit that was amusing him by just keeping out of his reach. I could not but recal, in connexion with my friend, the incident of Mungo Park when ready to perish, destitute and abandoned, he had thrown himself on the blistering sands of Africa, determined to yield himself unresistingly to his fate, but turning, he descried a little flower sending up its sweet perfume and displaying its beautiful petals on the arid waste; surely, thought he, if God cares for this fragile flower, so lone and friendless, he will provide for me; and his subsequent exertions brought him within aid that rescued him from destruction. *Flowers are indeed God's smiles*, when they can thus take the soul gently out of the depths of despair, and lift it high above the vexatious disappointments of this world. They purify the heart they gladden, and while they make the man happier, they make him better than he was before. R.

BOTANY.

Botany, in the most confined sense of the term, is the science which teaches us the arrangement of the members of the vegetable kingdom in a certain order or system, by which we are enabled to ascertain the name of any individual plant with facility and precision. Such arrangement is only to be considered as useful in proportion as it facilitates the acquirement of a knowledge of their economical and medicinal qualities, which cannot be perfectly ascertained without an acquaintance with vegetable physiology, the parts of plants, their functions, and uses. Botany, in its most comprehensive form, teaches us the names, arrangement, parts, functions, qualities, and uses of plants.

A few facts will demonstrate that it is impossible to deny that vegetables possess some degree of sensation. The Venus's fly trap (*Dionæa muscipula*) has jointed appendages to the leaves, which are furnished on their edges with a row of strong prickles. Flies, attracted by honey, which is secreted in glands on their surface, venture to alight upon them; no sooner do their legs touch these parts than the sides of the leaves spring up, and, locking their rows of prickles together, squeeze the insects to death. The well known sensitive plant (*Mimosa sensitiva* and *pudica*) shrink from the slightest touch. *Oxalis sensitiva* and *Smithia sensitiva* are similarly irritable; as also are the stamens of the flower of the barberry. One of this tribe (*Hedysarum gyrans*) has a spontaneous motion—its leaves are frequently moving in various directions without order or co-operation. When an insect inserts its proboscis between the converging anthers of a kind of dog's bane (*Apocynum androsæmifolium*), they close with a power usually sufficient to detain the intruder until his death. If from these and many other considerations, we conclude that plants are endowed with a certain degree of sensation, or at least of irritability, we can pursue that path of the science no further. Such are the results of life; what constitutes the living principle no human eye can discover.

We gaze on a rose as it waves in the plenitude of its vigour, admire the tints of its petals, the verdure of its foliage, the gracefulness of its form, the delicacy of its fragrance. We may come on the morrow, and it has been blasted—those petals are scattered on the borders—those leaves are withered and sapless—and scarcely a vestige of its loveliness remains.—Wherefore is this change? The same components remain—the same food was ready for its nourishment; but some invisible governing principle—some unknown agent—has silently departed, without one vacancy to point out where it had resided, but a total ruin, to show that it had pervaded the whole. Let a few more hours pass away, when the air, and moisture, and heat, external agents which were subservient to its welfare, now concur in completing its destruction—it is partly dissipated in pestilential exhalations, partly reduced to a few earthy and saline particles. Life, whilst it continued, prevented this ruin; but still, like its Great Author, "no one hath seen it at any time."

Distinction between the vegetable and animal kingdom.—The definition of a plant to a superficial observer may appear easy; but those who have studied natural history are aware of the difficulty of drawing a just line of distinction between the animal and vegetable kingdoms. It is easy to distinguish a horse, or even a worm, from a rose tree or a fungus; but to distinguish a sensitive plant, &c. by descriptive marks from many zoophytes has hitherto baffled the acutest botanists. Many plants are gifted with spontaneous motion; whilst many animals, as the corallines, are devoid of locomotion; so that neither of these qualities avails us in distinguishing the two kingdoms. In short, whilst the zoophytes, most of which take root, grow up into stems, and multiply by buds and slips, must still be considered as animals, no one can correctly define how plants differ from them. It is, however, fortunate, that the student is seldom placed in a situation where these nice distinctions are to be made. Where specimens are to be examined which admit of the doubt whether they belong to the lower animals or to the vegetable tribes, chemistry may be called to our aid; if, when burnt, they emit an ammoniacal smell resembling that of feathers, similarly treated, we need not hesitate to consider them as animal products; if that of burning wood, they are fit objects for our botanical researches.

Blue-Bells. (*Scilla nutans.*)—A common name given to a bulbous-rooted plant of the hyacinth kind, frequently met with in woods and other places. Its bulb is globular, white, and coated; its leaves linear, chanelled, shining, and drooping in their upper half; the flowers form a cluster on an upright stalk, drooping in the upper half; they are blue, pendulous, nearly an inch long, and scented. The bulb is acrid, but loses its acrimony in drying, in which state it answers as a substitute for gum-arabic in the art of dyeing, by being simply dried and powdered.

Johnson's Enc.

Domestic Silk Raising—No. 2.

To the Editors of the American Agriculturist:

Gent.—Feeling a deep interest in the prosperity of our country, and alarmed with existing and threatened evils, I availed myself of the opportunity presented by the "American Agriculturist," to express my views as to the cause of many of these evils, and the most likely means to check them. One cause I believed to have been, a relaxation of moral instruction, unreasonable indulgence, and early habits of idleness; in short, a general abuse of the blessings of Providence; and the best corrective would be employment, with a reasonable prospect of acquiring a respectable living. I therefore recommended instruction in the mechanic arts, and a good knowledge of farming in all its branches. I gave the preference to farming partly, perhaps, from having once been engaged in that business, and found it very agreeable, and reasonably profitable. I have however, always considered a well informed farmer as one of the most independent, happy and respectable members of society.

In the article I have alluded to, and inserted in your first number, I promised to communicate some improvement which I had made, in making butter, the culture of silk, &c.; the last of which, although of no very great *importance* in itself, yet viewed in connection with the business of which it forms a part, it is infinitely so, as I consider the culture of silk a business which may be made of more importance to this country, than any ever introduced into it; not merely as respects the general benefit, but *particularly so* to the industrious cultivator of the soil, from the most wealthy and independent farmer down to the man who owns but *three* acres of land. And it possesses one recommendation of which no other business can boast. It furnishes employment for those classes of society whose time is now useless—females and old people of both sexes, and children—who would do three-fourths of the labor in a business which would, in a short time, save millions of money to our country, and which, however great, would be hardly equal to the happy moral influence that the habits of industry would have on our youth.

That the soil and climate would be favorable to the culture, I have not a doubt, judging in part from my own experience. About ten or twelve years since, I saw a short treatise on the culture of silk, and believing it might be made useful to a class of society which were almost suffering for want of employment, and having a few white mulberry trees in my garden which came there by accident, I succeeded in procuring some eggs, through the influence of a friend, which coming too early for use, I put in a small *tin* box and sent to the cellar, where they remained until one warm day in June. The box was then covered with small black worms, and never having seen one, I did not suspect they were the silk worm until on opening the box, I found the eggs mostly empty. I succeeded however, in saving about one hundred and fifty, which, on being put upon some leaves, ate most ravenously. They grew to a good size and gave me no trouble, until ready to wind their cocoons, when they were disposed to ramble, notwithstanding I had furnished every *accommodation directed* in my book, green bushes and dry. But they ran from them all, until I cut some thrifty sprouts from a Lombardy poplar, with fine large leaves, and had them suspended over their tray, the extreme end touching the bottom of the tray.—They appeared at once to be attracted by the odour, and began to go up; the leaves wilting, formed little *funnels* in which they soon went to work, and on taking them down, there were several branches where almost every leaf contained a cocoon, of which I had 145, having lost but three or four. I selected twenty for eggs. The remainder I wound, with the assistance of an old lady formerly of Mansfield, Conn., when I demonstrated a fact which I had doubted, that many of the cocoons would produce more than ten knots, on a reel measuring 6 feet 2 inches round, and *forty threads* to a knot. The cocoons were of a delicate straw colour, except eight or ten of a deep orange, one of which I put into the water with the others, and the moment it broke was joined on again, so that not a thread was wanting, and it run to ten knots and about ten threads. I am more particular in naming this, that the yield may be compared with that of the silk producing countries.

I made about eighty skeins of silk. Twenty-four of them I gave to a Benevolent Society, which brought them at a Fair 24 shillings. Most of the eggs I distributed among some of my friends, requesting them to give them to those who would be most likely to profit by them. I believe, however, that very little was done with them. As I commenced the business as mere matter of experiment, more for the benefit of others than myself, I gave it up after raising, the second year, a few hundred with the same success as the first,—fully believing that it would be commenced and carried on with the success at some future day.

OCTOGENARIA.

CORN BREAD OR PUDDING.—Stir up one quart of Indian meal with milk, add two beaten eggs and a table spoonful of melted butter, pour the batter into a bakepan, and slowly bake either with coals on the lid, and sitting on them, or hung over the fire. This is a nice process, and upon the baking greatly depends the flavour of the bread. Eaten warm with butter, we have found it one of the most delicious kinds of bread we ever tasted.

An effectual remedy for BURNS AND SCALDS however extensive, if immediately applied. From a physician of Philadelphia, originally published in the U. S. Gazette.

Take soot from a chimney where wood is burned, rub it fine and mix one part soot to three parts of hog's lard, or any kind of fresh grease that is not salted, spread this on linen or muslin for more perfect adaptation. In very extensive burns the cloth should be torn into strips. No other application is required until the patient is well, except a repetition of this.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

The Connecticut Valley.

SCENERY, CATTLE, SHEEP, FARMING, ETC.

Black-Rock, March, 1842.

To one who admires charming scenery, a careful cultivation of the soil, and the enjoyment of a great degree of human comfort with moderate means, no region can be more interesting than that bordering the Connecticut river. The traveller, taking the stage coach at Hartford and crossing the noble stream in front of the city, passes into the fine old town of East Hartford, and as he rides for miles under the shadow of those magnificent old elms which dignify the dwellings and streets, cannot but imbibe a most profound respect for the hardy industry and homely virtues of the ancient dwellers in that pleasant land; and also admire the good taste of the present occupants who so gratefully preserve these precious relics. Throughout East Windsor, in nearly its whole length along the river, the same beautiful street continues, each side highly cultivated and dotted with comfortable farm houses; and occasionally a dwelling of modern erection, and of considerable architectural pretensions. These, with the neat and tasteful churches standing in every hamlet and village, give an air of cheerfulness and beauty to the scene not often surpassed.

The cultivation of the valley is of the best in New-England. The broad and fertile bottoms of the Connecticut are heavily cropped with grass, Indian corn, and the smaller grains; while the light and comparatively poor soils of the uplands, afford either pasturage, orchards, or an occasional crop of rye, buckwheat, or oats. In the vicinity of Warehouse Point on the river in East Windsor, large quantities of tobacco are grown of late years. Several extensive distilleries are located at that place, and the manure obtained from the piggeries attached to them, is found to be exceedingly favorable to its growth. Its cultivation, thus far, is successful and the crop profitable.

In Enfield and Long Meadow, cattle are fatted to some extent. Much hay is grown both for farm uses and exportation, and the farmers live in easy circumstances. A few miles above the latter place is Springfield, an ancient yet thriving and beautiful town, and now by the construction of the Western Rail Road connecting Boston with Albany, the seat of a growing commercial business. The fine, rich farming town of West Springfield, whose broad river bottoms stretch over a great extent, lies on the opposite side of the Connecticut, and is connected to the eastern by a bridge; and probably no town in America has higher advantages in a productive agriculture than this. Its beautiful meadows—its arable upland—its productive orchards, and comfortable farm houses, many of considerable elegance, indicate great agricultural prosperity, and the enjoyment of rural ease and opulence. Farms here are worth from one to two hundred dollars per acre, depending upon their cultivation, improvements, and locality. Wheat is but little grown; corn, grass, and grazing being the principal occupations of the farmers. Throughout the entire Connecticut Valley many flocks of valuable sheep are kept, which in the summer are driven a few miles back to the neighboring hills to pasture, and in the autumn are brought in to winter on the home farms of the proprietors in the valley. These are principally of the Merino and Saxony varieties, and are kept chiefly for their wool, here a considerable source of income. Their influence on the "home lots" and meadows, in thus consuming the summer crop, and adding annually to their production, may be duly estimated. The practice is essentially a good one, and has proved eminently beneficial. Here are meadows or mowing grounds which have been in grass constantly for more than a hundred years, and by occasional top dressing they remain in excellent condition, and the grass and hay are considered sweeter and more nutritious than those newly laid down. Wherever this practice is pursued and the lands properly treated, the result is successful. I here saw a capital Ayreshire bull, the property of the Hampshire Agricultural Society. His stock is already considerably scattered over the country, and is generally approved by discriminating farmers who have reared it. I have little doubt but this stock is derived from a cross of the improved Short Horn upon the native Scotch; and that by improving the fortunate admixture of these bloods in the lowlands of Scotland, this race has become now well established as a valuable stock for that country. That, with proper care and good breeding, they may greatly improve the neat stock of New-England, I have little doubt, as their compact and hardy forms, and evident milking properties seem well adapted to the short, yet nutritious pastures and the somewhat rigorous climate of those States.

At the parish of Chicopee, five miles above Springfield, I stopped to see the farm of the late Col. Abel Chapin, now occupied by two of his sons, and for thirty years past famous for producing the finest and largest fat oxen in the state. One of the brothers Chapin, whom I found at home, shewed me five noble animals, bred on the farm which they were grazing, of the several ages of five, four, and three years. They were certainly the finest bullocks I had lately seen, and three of them, a five, four, and three years old, were the best and largest steers of their age, that I recollect ever to have looked upon. The two oldest were weighed a few days previous, and swung a trifle over 4800 pounds, being 2400 each; and they had eaten, as I was told, but little meal, grain, or roots. The other, three years old, would, as well as I could judge, weigh 1800 pounds as he stood. These three animals were about three-fourths Short Horn blood, being sired by thorough-bred bulls; and their dam, for they were all of one cow, was of native stock principally, with a remote cross of Devon and Hereford blood in her veins. The other two bullocks were deep red in color, partly of Hereford with perhaps a slight dash of Devon blood, upon a native stock and a trifle of Short Horn; for on examination I find, that nearly all the superior animals in New-England, although claiming in many instances to be principally, or altogether of native origin, are more or less crossed with foreign blood, as the Massachusetts Agricultural Society, together with several public spirited individuals, have, for twenty-five years past, distributed a considerable number of valuable foreign cattle throughout the state, the influence of which can be seen in the breed of almost every enterprising farmer. These animals of the Messrs. Chapins, are all to be fed as long as they continue to thrive rapidly, or until they are about seven years old, when some of them will weigh alive near 4,000 pounds.

As this farm had long been celebrated for its extraordinary bullocks, I was anxious to ascertain whether these which I now saw were equal to, or superior to those which the late Col. Chapin had usually reared and fattened. I was answered, that these were much finer boned, and better shaped than the old stock, which were mostly of native blood, coarser, and throwing off more offal; and although large and bulky, they were grosser feeders, did not lay on flesh so evenly, and told less profitably in the butchers' hands than these—and finally, that they would drive a cow ten miles and pay five dollars for the services of a thorough-bred Short Horn bull, rather than use a common one for nothing.

This was the result of *their* experience—a judgment founded on a long course of practice in the Connecticut Valley. These gentlemen are rearing some valuable heifers of the Short Horn, or Durham cross with their native cross, and assert their determination to adhere to that stock to a great extent hereafter. The brother with whom I conversed had travelled extensively in England, and had critically observed much of the best stock in that country. His conviction of the utility of raising the character of our domestic cattle in this country by foreign crosses is decided.

A Herd of Short Horns.—From Chicopee, I proceeded to South Hadley Falls, where I stopped to see the valuable Short Horn stock of Messrs. Collins & Lathrops. They number some five and twenty head now on the farm, of the best blood, comprising crosses of some of the earliest New-England importations. They thrive well on the farm where they are kept, the soil being a strong clayey loam, although on hill land, and very friendly to the production of grass. Most of the cows in this herd are valuable milkers, and they generally possess the high qualities of excellence identified with this beautiful race of animals. In the summer of 1840, the Messrs. Lathrop took three of their best heifers to the neighborhood of Philadelphia for the purpose of crossing their progeny with a fine imported bull, purchased by Mr. Cope, of Thomas Bates, Esq. of Kirkleavington in Yorkshire, England. The produce were three bulls and one heifer calf, (two of them being twins,) of superior excellence, as they appeared to my eyes, and well repaid the expense of so laborious an enterprize. I learned that these animals are fast gaining in the estimation of even the New-England farmers, who have been altogether slow in acknowledging their superiority to their native stock, and that they find ready sale for all they have to spare. These facts are gratifying to the lovers of agricultural improvement. The Messrs. Lathrop are adding new buildings on their farm for the accommodation of their stock, and when their present improvements are completed, they will have one of the neatest and most valuable farms in this vicinity.

I ought, perhaps, to observe that I was accompanied in this jaunt from Springfield by Mr. Horatio Sargent of that town, who drove me up after a beautiful, spirited little horse of the "Morgan breed," so highly valued in New-England, and which originated in Vermont. Mr. S. is a great judge of horse flesh, and among the great number which, for a series of years, have passed through his hands, he is more partial to these for business purposes than any other. They are compact and graceful in their figure, of great speed and endurance, and uniformly, when well trained, make extraordinary travellers.

Roads.—As I passed on towards Northampton, I was struck with the public spirit of these indomitable Yankees, in witnessing the great expense of constructing their ordinary highways, which they had in several instances done to avoid a sharp hill, or to cut off an extra mile of travel. Nowhere in America are so good common roads found, probably, as in Massachusetts. They render a great facility to the farming interest, and are an indispensable convenience to their comfort and prosperity in any country. Would that the people of many more fertile districts of the United States would copy the excellent habits of these people in that particular; and although their heavy loams and stiff clays may refuse to afford them the good roads of the sandier soil of New-England, yet a decent skill and a proper application of labor will abundantly help their present condition. On no one subject of agricultural convenience does our country require a greater reform than in this of roads.

Northampton.—Emerging through the gap enclosed by the two mountains, the broad and magnificent basin in which is located the most beautiful of all country towns, Northampton, Hatfield and old Hadley, spread out like a beautiful picture before me. I entered this upper valley by the pretty hamlet of Hockanum, and crossed the river on the ice. A ride of two miles across the fertile bottoms, or intervals as they are here called, brought me to Northampton, the termination for the present of my little journey up the valley. These bottoms are almost annually overflowed by the freshets of the river, which leave a rich deposit of fertilizing matter. They are unfenced, and although belonging to numerous proprietors, and in parcels of five, to two or three hundred acres each, are distinctly separated by stakes, furrows, and other recognized lines of division. The different fields are cultivated in grass, where the heaviest crops of hay are gathered, yielding two, and in some instances three tons to the acre. Indian corn, oats, barley, rye, broom corn, tobacco, and other crops are cultivated in the highest perfection, extending over several thousand acres, without interference by the several owners, who reside in the town or its vicinity. In the month of October, on a given day, for this is all regulated by law in general town meeting, the gates enclosing this immense ground are thrown open, and each proprietor turns in his cattle, sheep, and horses, as the case may be, according to his number of acres, and the autumn herbage is eaten off. Before the winter sets in every thing available is taken from the soil and it lies open, awaiting again the spring freshet, or the more sure and pains-taking supply of manure from the farm yard. I confess that this charming spectacle of primitive and peaceful cultivation reminded me strongly of the Scriptural scenes of rural life, and spoke convincingly of the good order and strict regard for individual rights which prevail among these people. Riding out, as I afterwards did, with my excellent and estimable friend H., at whose hospitable dwelling I was for the time domiciliated, and looking abroad from the brow of Round-hill, as sweet a spot as the world can boast, upon the quiet and beautiful valley before me, hemmed in by picturesque mountains, I no longer wondered at the hardihood and perseverance which the pioneers, who early sought that valley, through every privation and suffering, had evinced in maintaining its possession; nor that it had produced the long line of illustrious men whose shining virtues and fervent patriotism have preeminently distinguished its character. My imagination could distinctly trace in their lives and examples, the results of the rigid honesty and high-souled daring of their early ancestors. A considerable portion of the people are farmers, although the village, being the seat of justice for the large and wealthy county of Hampshire, is a place of considerable trade, and the residence of gentlemen of leisure. Their dwellings are situated on a few acres of "home lot," with the needful appliances of easy rural life attached. Their farms lie partly on the adjacent hills, or plains, and in the river bottoms, which they manage with skill and economy. Their agriculture is usually prosperous, and they are, almost without an exception, in comfortable circumstances and "good livers;" while not a few of them are rich, holding their hundreds of acres, and thousands in productive investments. The broad and lofty elms shade the streets in prodigious numbers, and give an air of opulence and repose to the scenery that can be nowhere surpassed. Visiting the farm of the Hon. Isaac C. Bates hard by, I saw a superior flock of Saxony sheep numbering several hundreds, which were in excellent condition. I saw also some fine crosses of the Devon, and the Hereford cattle with the native breed, in the cows, and other neat stock of the farm; and young Mr. B., who manages the farm, assured me that, contrary to what is generally supposed of these breeds, they prove excellent milkers. As I have often in my rambles met with instances of this sort, which completely put at fault the commonly entertained opinions in regard to these two kinds of animals for dairy or milking properties, I incline to the opinion that the change of country or location affects them in this quality, or that they partake altogether of this excellence from their native blood, or that the standard of comparison in England, where these animals originate and derive their reputation, is much higher than with us. This subject requires investigation. The specimens which I saw were certainly superior in appearance, and a manifest improvement over the common cattle, although possessing but one-half or even less of the foreign blood. Theodore Strong, Esq. has also a large flock of Saxony sheep, which he has bred for many years, and which I saw at his farm. Although the wool bears a tolerable price, and the sheep yields a good fleece in proportion to its size and consumption of food, yet I doubt if our woollen manufacturers can afford to pay the additional price that it *should* command over the ordinary Merino. Yet as these gentlemen and many others are content to grow that quality of wool at the prices obtained, they should be deemed good authority on the subject. L. F. A.

To be continued.

Gent:—The following preparation will effectually exterminate all caterpillars, snails, bugs, beetles, earth fleas, leaf lice, ants and other insects on fields, trees, bushes, and hedges.

Take diluted Pyroligneous acid, 1 gallon; white oak bark, 1 lb; urine, half gallon; garlic, half lb. After soaking the oak bark and garlic for two days in the acid and urine, strain them off and sprinkle once a week or oftener, the trees infected with insects, or the pea, cabbage, &c. and they will be preserved for the season.

This fluid has proved very successful in the experiments made by

Dr. Lewis Feuchtwanger.

New-York, April 20, 1842.

Mr. Solomon Homer, of Brimfield, Mass. writes us, that "he has just killed five pigs, of the following dressed weights, viz: 506, 492, 457, 407, and 392 pounds. They are the cross of the Berkshire on the native breed, and the four first were about seventeen months old, the last, a sow, two years and four months old, taken from her litter of pigs but two months before, when quite thin."

The above are respectable weights for older animals.

On the comparative Feeding Properties of Mangold-Wurzel and Swedish Turnips.

BY EARL SPENCER.

My Dear Sir,—You expressed a wish that I should again publish the results of an experiment which I made fifteen or sixteen years ago on the comparative feeding properties of Swedish turnips and mangold-wurzel. It was published in the "Farmer's Journal" of that day, but I believe it is now very little if at all remembered; and I agree with you in thinking that it may be more interesting now, when men's minds are more turned to this sort of investigations.

The mode of ascertaining the nutritious properties of different kinds of vegetable food by chemical analysis, which was adopted by Sinclair and other scientific men, gives a reasonable probability of their relative value; but we know so little of the processes of nature in converting food into the flesh of the animal that consumes it, that this mode has never appeared to me quite satisfactory. Although, therefore, I believed that mangold-wurzel contained more saccharine matter than Swedish turnips, and ought consequently to be the more nourishing root of the two, I determined to try practically whether an ox fed upon mangold-wurzel increased in weight more than one fed upon Swedish turnips, in proportion to the quantity of each consumed. In order to have rendered my experiment perfectly accurate, I ought to have ascertained the weight of hay consumed by each beast during the progress of the trial, but I did not do this, although I am pretty confident that the quantity consumed by each was nearly the same. I selected two steers, tolerably and at least equally well bred: No. 1 calved March 29, 1823, and No. 2 calved May 6 of the same year; and on the 24th of December, 1825, I put No. 1 to Swedish turnips, and No. 2 to mangold-wurzel. I ascertained their weight by measurement, and both of them measured the same, viz. 4 ft. 10 in. in length by 6 ft. 5 in. in girth, making them to weigh 668 lbs. each. On the 23d of January, No. 1 had consumed 1,624 lbs. of Swedish turnips, and measured 4 ft. 10 in. in length by 6 ft. 7 in. in girth, making him to weigh 703 lbs. and to have increased in weight 35 lbs., or at the rate of 48¼ lbs. for every ton of Swedish turnips consumed. No. 2 had consumed 1,848 lbs. of mangold-wurzel, and measured 4 ft. 10 in. in length by 6 ft. 8 in. in girth, making him to weigh 721 lbs., and to have increased in weight 53 lbs., or at the rate of 65½ lbs. for every ton of mangold-wurzel consumed.

This difference, however, might have arisen from No. 2 having a greater propensity to feed than No. 1; I therefore now put No. 1 to mangold-wurzel, and No. 2 to Swedish turnips. On the 20th of February, No. 1 had consumed 1,884 lbs. of mangold-wurzel, and measured 4 ft. 11 in. in length by 6 ft. 8 in. in girth, making him to weigh 734 lbs., and to have increased in weight this month 31 lbs., or at the rate of 36¾ lbs. for every ton of mangold-wurzel consumed. No. 2 had consumed 1,880 lbs. of Swedish turnips, and measured 4 ft. 11 in. in length by 6 ft. 8 in. in girth, making him to weigh also 734 lbs., and to have increased in weight during this month 13 lbs., or at the rate of 15½ lbs. for every ton of Swedish turnips consumed. I then put both to mangold-wurzel, and divided the food equally between them. On the 19th of March, they had each consumed 1,792 lbs. of mangold-wurzel; No. 1 measured 5 ft. in length by 6 ft. 10 in. in girth, making him to weigh 784 lbs., and to have increased in weight 50 lbs.; No. 2 measured 5 ft. in length by 6 ft. 9 in. in girth, making him to weigh 765 lbs., and to have increased in weight 31 lbs.

It would appear, therefore, as if the propensity to feed of No. 1 was greater than that of No. 2 in the proportion of 50 to 31; but, notwithstanding this, in the first month, when No. 1 was upon Swedish turnips, and No. 2 upon mangold-wurzel, No. 2 beat No. 1 in the proportion above stated of 65½ to 48¼. It appears as if there could be no great inaccuracy in estimating the relative weight of the animals, as soon after the experiment was concluded I sold No. 1 to a butcher in the country for 24*l* 3*s*., and No. 2 at Smithfield for 24*l*.

It will be for practical men to decide upon the value of this trial; what appears to me to be the most conclusive part of it is, that No. 2, who had during the first month, when he was feeding upon mangold-wurzel, increased in girth 3 in., in the next month, when his food was changed to Swedish turnips, did not increase in girth at all, and when in the third month he was feeding again upon mangold-wurzel he again began to increase in girth, because it is very well known that, if an animal is changed from more to less nutritious food, the probable consequence will be that his growth will be stopped. The result appeared to me so decisive, that I have not tried the experiment with the same accuracy since; but I did try the following year the feeding a cow alternately on Swedish turnips and mangold-wurzel, and though I have not by me the details of the trial, I remember that the result confirmed the experiment of the previous year.

Believe me, my dear Sir,
Yours most truly,
Spencer.

Philip Pusey, Esq.

On the Cultivation of Mangold-Wurzel.

BY WILLIAM MILES, M. P.

Dear Pusey,—Notwithstanding the favorable result of Lord Spencer's experiment with mangold-wurzel, the consideration will naturally suggest itself to the mind of the farmer previously to his adopting the cultivation of this root, whether, although the mangold-wurzel may bring on his cattle faster and better than the Swede turnip, it is not more difficult of culture, more tender in its habits, and less productive in bulk per acre than the Swedish turnip.

I have grown the common red sort for six, the sugar-beet for four, and the orange-globe for three years; these kinds have regularly come into course with Swedes upon light land; the product has always been equal, in most cases far heavier. The Swede turnip has enemies innumerable; I have never observed the mangold-wurzel attacked either by fly, slug, or wireworm. Equally a cleansing crop with the Swede, it stores better, and lasts good for a longer period. In the summer of this year I was using sugar-beet with the stall-fed cattle, which cut perfectly good and crisp in August. The mode of culture I adopt up to depositing the seed in the ground is the same as that adopted in Northumberland for ridging the Swede; great care, however, must be taken that the seed of the mangold-wurzel is not buried too deep, or it will not vegetate. Dibbling, as you never can ensure an equal depth, does not answer; nor does the seed drill well, if properly prepared by steeping, which I should recommend, for at least twenty-four hours before planting. To ensure, therefore, a proper depth, I have been in the habit of using an iron wheel, round the outer circumference of which, 18 inches apart, iron points project, broad at the base and tapering towards the point, about 2½ inches long; this is wheeled upon the top of the ridge, the man walking in the furrow, and thus holes are formed which can never run into the excess of too great depth, and into which the seeds are deposited by women and boys following the wheel, and generally covering the seed by drawing the foot as they advance at right angles with the ridge over the holes; the roller follows, and thus the sowing terminates. One man with the wheel will keep six persons well employed in depositing the seed after him. This system was recommended me by my friend Mr. Webb Hall, and since I have adopted it my crop has never failed.

The after culture to the storing is similar to that of the Swede; great care, however, should be taken in never permitting two plants to grow in the same spot, which will be the case frequently, should only one capsule even be deposited in each hole, as every capsule contains many seeds. Should the tops remain uncut, the plant will stand a considerable degree of frost; it should, however, be stored early in November; the best and cheapest method is to build it up against some high wall contiguous to your beast-sheds, not more than 7 or 8 feet deep, carried up square to a certain height, and then tapering in a roof to the top of the wall; protect the sides with thatched hurdles, leaving an interval between the roots and the hurdles, which fill up with dry stubble, cover the roof with about a foot of the same, and then thatch it, so as to conduct all moisture well over the hurdles placed as a protection to the sides. In pulling the plants care should be taken that as little injury be inflicted upon them as possible; cleansing with a knife should on no account be permitted, and it is safer to leave some of the leaf on than by cutting it too close to impair the crown of the root. The drier the season is for storing the better, although I have never found the roots decayed in the heap by the earth, which in wet weather has been brought from the field, adhering to them. As to the productiveness of the different sorts, in one year I have grown a larger quantity of sugar-beet per acre, in another of mangold-wurzel; both these, however, I consider exhaust the land in a greater degree than the Swede; but I have formed a very high opinion of the orange-globe, though not so large a producer generally as the two other sorts; it appears always to throw at least two-thirds of its weight above ground, neither is its tap-root larger nor its fibrous roots greater than those of the Swede turnip. Care should be taken in giving cattle every species of this root, as if taken in excess it is apt to scour; indeed, from the avidity with which cattle eat the sugar-beet, and from its viscous properties when quite fresh from the ground, it should be stored so as to come into consumption the last of the roots.

In feeding store cattle I should commence with Swede turnip, proceed with the orange globe, then with mangold-wurzel, and finish off with the sugar-beet; thus not only frequently varying the food, but using them in the order corresponding exactly with the nutritive matter contained in each description of plant. I have found indeed equally with Lord Spencer, that it will not do to return from any sort of mangold-wurzel to Swede turnips, as even beasts in the straw-yard have for two or three days refused such a change. I may add that the earlier in April your mangold-wurzel is sown the better, the deeper the tilth the greater probability of a heavy crop, but that although both the mangold-wurzel and sugar-beet require a deeper and stronger land than the Swede turnip, yet that the orange-globe will flourish wherever the latter will succeed.

These are the details of the system I adopt as regards this root, and I shall be glad if I should prevail upon those who have not yet tried the culture of it to grow a small quantity, assured as I am that for certainty of crop and feeding properties the mangold-wurzel will not deceive expectation.

Yours truly,
W. Miles.

Kingsweston, Nov. 1, 1841.

Facts on Food and Manure.

It has been before stated that every part of a plant contains nitrogen as well as carbon; but, as an invariable rule, the seed of all plants contains a much larger quantity of nitrogen than the leaves and stalks, and a lesser quantity of carbon, and inversely, the leaves and stalks contain a much greater quantity of carbon, and a lesser quantity of nitrogen. Now when a horse is fed on grass, his food consists almost entirely of carbon; and the result is, that when he has a sufficient supply he gets fat—that is, that particles of oily, fatty matter are deposited on the muscles under the skin; but, as it is well known, a horse in this condition is quite unequal to any work, and the least exertion reduces his bulk. But when the same horse, under other circumstances, is fed on corn, his food consists principally of nitrogen; and although he may never, under this keep, get as fat as under the other, still the increase he does acquire will be pure muscle, or, as it is technically called, sound flesh; and on this keep he can perform infinitely more work with less fatigue than on food containing no nitrogen.

A more complete instance could not be adduced to show that animals as well as plants can only assimilate that food which is presented them. In the first case, carbonaceous matters being the food of the horse, carbon is deposited in the shape of fat; in the latter, when more nitrogen enters into the composition of his food, the deposit of muscle preponderates. So it is with wheat. With a manure that only supplies carbonaceous matter, starch is the result. With a manure containing nitrogen, gluten is formed; both cases being completely analogous, and affording unerring proof of one simple and uniform law.

Another example of the singular effects resulting from the use of a chemical manure; not in the common and well known case, resulting from all manures, of an increase in the quantity of the crop, but in the quality. The authority is Professor Daubeny, of Oxford.

"In an analysis of one hundred parts of two different specimens of wheat which were grown on the same field, one of which had been dressed with the nitrate of soda and the other not, the result was—

	Wheat with nitrate.		Wheat without nitrate.
Bran, ...	25	Bran, ...	24
Gluten, ...	23¼	Gluten, ...	19
Starch, ...	49½	Starch, ...	55½
Albumen, . . .	1¼	Albumen, . . .	¾
Extract and water,	1	Extract and water,	¾
	100		100

Thus it is seen that the wheat so nitrated contains four and a half per cent. more gluten and one half per cent. more albumen than wheat not so nitrated; and as it has been stated that gluten is the substance to which flour owes its nutritious qualities, this alone would prove our position. But if we carry our investigation further, and see its results as to the real produce of bread, we shall be more fully convinced than ever of the utility of this manure. And here again we resort to experiments made by the same distinguished Professor, for an elucidation of the fact.

Three pounds and a half of flour made from wheat dressed with nitrates produced 4 lbs. 14 oz. of bread; whilst three and a half pounds of flour, made from wheat where no nitrate was used, yielded only 4 lbs. 4 oz. of bread; thus leaving 10 oz. of bread in favor of the wheat so nitrated."—*Squarey's Treatise on Agricultural Chemistry.*

Butter.

The great point in making good butter, and that which will keep, is the freeing it from all buttermilk; and if everything else is well done, if this point is overlooked, good butter is impossible for any length of time. The mixture of milk in any degree with the butter is sure to produce frowsiness or any unpleasant taste to the butter: and the entire freedom from this constitutes the grand secret of making good butter. There are many who think washing butter with water incompatible with retaining the rich flavor, but if the water is cold and pure it is scarcely possible anything should be washed away, the buttermilk which destroys the flavor of all butter excepted. Besides, the best butter in the world, and that which in all markets commands the best price, viz., Dutch butter, is invariably made in this way; and where the example has been followed by others, it has rarely failed of success. If any, however, doubt the propriety of washing butter, they may use any method they choose, provided the milk is separated perfectly. Perfectly free from the substance that causes it to assume the putrid frowsy taste of bad butter, it may be kept with almost as much ease as tallow; solidity in packing, clean, sweet vessels, and a low temperature, will ensure its keeping for any reasonable time. Let no one expect good butter, however, so long as coarse impure salt is used; or a particle of the buttermilk is allowed to remain in it.—*Domestic Annals of Butter.*

THE KITCHEN GARDEN.

We commence in this number, a brief manual for the kitchen garden, believing we can offer no better selections to our readers, for the small space it will occupy, than a few plain rules for the successful rearing of those useful vegetables, that are always to be found in the well cultivated garden. They are principally taken from those eminently practical farmers, the Shakers. They need no other recommendation than is to be found in their own successful practice.

Asparagus.—This is a very delicious esculent vegetable, and easily cultivated, after the first operation of preparing the ground. It requires some of the deepest soil in the garden; a rich, sandy loam is the best. The ground should be trenched or spaded up, and a plenty of rotten manure well mixed into the soil to the depth of one foot and a half. Then mark out your beds six feet wide, forming two feet alleys around them, by throwing up six inches top soil on the beds. Next use the rake and hoe, till the ground is well pulverized and made level and smooth. Then mark out your drills one foot apart and two inches deep. Soak the seed twelve hours in warm water; drop it about one inch apart in the row; rake it in, and press the soil over the seed with a board or garden roller. When the young plants are up, hoe them carefully, and keep them clear of weeds through the season. After the second hoeing, pull out the weakest plants, leaving them about four inches apart.

A bed of asparagus, well managed, will produce buds fit for cutting the third spring after sowing. The buds should be cut one inch or more below the surface of the ground. The cutting may be continued until the first of July; then let it grow up, but hoe it frequently till it covers the ground.

Spring dressing. As soon as the ground is dry, so as to work light, separate the stalks from the ground with a hoe, cutting them off beneath the surface, and loosen the surface of the ground all over the beds. Some dry straw, litter or fine brush may be added to these stalks when dry, and the whole burnt together on the ground. This will promote the growth of the asparagus, and destroy many insects' eggs, seeds of weeds, &c. The ground should then be covered one inch thick or more with rotten manure or compost, well incorporated with the soil above the roots; then rake the beds smooth and level. An application of swamp earth, salt or brine spread on the beds, has been found to promote the growth of asparagus.

Though this vegetable grows naturally in a poor, sandy soil, yet the sweetness and tenderness of the buds depend much on the rapidity of their growth, which is greatly promoted by richness of soil and good attendance. Beds of asparagus may be formed by preparing the ground, as before stated, and transplanting the root of two or three years' growth, setting them with the crown upwards, four inches below the surface.

A good bed of asparagus, if well attended to, will flourish many years; ours occupies one-eighth of an acre of land, the greater part of which has been planted more than 40 years, and is now as good as ever.

Directions for cooking asparagus. Cut the buds when from three to six inches high; clean them well in cold water, cutting off most of the white part, as that which grows beneath the surface of the ground is apt to be tough and bitter. Take water enough to cover the stalks, and put in salt sufficient to season them well; boil and skim the water, then put in the asparagus. Be careful to take them up as soon as they become tender, so as to preserve their true flavor and green color; for boiling a little too long will destroy both. Serve up with melted butter or cream.

—

Beans.—A dry, warm soil, tolerably rich, is the best for beans. The ground should be worked fine and mellow. Plant, for early use, from the 20th of April to the 1st of May. The early kinds may be planted in drills two and a half feet apart, and at the distance of three inches in the row, or in hills a foot apart.

The ***Early Purple*** is the earliest bean, and consequently preferred for early use. The ***Early China*** and ***Early White*** are excellent, either for stringing or shelling: they will be fit for use, if the season is favorable, in about six weeks from planting. The ***Royal White*** is a large, rich bean, excellent for shelling. This kind should be planted in rows three feet apart, and if in hills, two feet from each other, with four beans in a hill; if in drills, six inches apart in the row. The ***Running*** or ***Pole Beans*** should be planted in hills, three and a half feet distant each way. They should be planted as early as possible, in a rich, mellow soil. We prefer setting the poles before planting. For this purpose we stretch a line, and set the poles by it; then dig and loosen the earth, and drop five or six beans in a circle round the pole, about three inches from it, and cover with mellow dirt one inch or one and a half in depth. When the plants are well up, stir the earth around them, and pull out the weakest plants, leaving three to each hill. This should be done when they are perfectly dry; for beans never should be hoed when wet, nor when any dew is on them.

The green pods of beans may be kept and preserved fresh by laying them down in a jar or tub, with a layer of salt between each layer of beans.

—

Beet.—Prepare your ground as early in the spring as it will work light and mellow, by plowing or digging to the depth of eighteen inches. A deep, rich soil produces the finest roots, If a small bed of the earliest kinds is sown as early as the season will admit, they will be fit for use in June. After making your beds fine and smooth, mark out the drills eighteen inches apart, and one inch deep; drop the seeds along the drills, two inches apart; cover them, and press the soil a little over the seeds. When the plants are up and sufficiently strong, thin them to the distance of six inches apart in the rows. The ground should be often hoed round the plants, and kept free from weeds. Beets for early use, should be sowed about the first of May; for winter use, two or three weeks later, the beds kept clean through the summer, and the roots taken up before hard frosts in the fall. Care should be taken in cutting off the tops, not to injure the crown.

A good method of preserving beets fresh through the winter is, to lay them in a circular form on the bottom of the cellar, with the roots in the centre and heads outward; cover the first course of roots with moist sand; then lay another course upon them, and cover with sand as before, and so on till all are packed and covered.

The *Mangol Wurtzel* and *Scarcity Beet*, also the *Yellow Swedish* or *Ruta baga* turnip, are often raised to great perfection by field culture, for which we give the following directions—

Field culture. Select a deep mellow soil; if not sufficiently rich, make it so with well rotted manure, thoroughly mixed with the soil to the depth of a foot or more. This should be done by plowing and harrowing when the ground is in good order to work light and fine. You may then throw up moderate ridges with the plow, about the distance of three feet apart. Pulverize and level the top of the ridges with a rake. Then, with a dibble or with the fingers, make holes on the centre of the ridge, two inches deep, and eight inches apart; and for beets, drop two seeds in each hole, and cover with fine dirt, pressing it a little over the seed.

Swedish or Ruta baga turnip, we generally prefer sowing in a bed of light, mellow soil, from the 1st to the 10th of July. After having attained a sufficient size for transplanting, the ground being prepared as above directed for beets, set the plants about ten inches apart in the row; while the plants are young, the ground should be often stirred around them, and kept clean from weeds through the season. The horse plough, or cultivator, should be often used between the rows, especially in dry, hot weather.

The average crop of beets and turnips, on good land, with proper management, is about fifteen tons, or 560 bushels, to the acre. The quantity of seed required for the Mangol Wurtzel or scarcity beet, is about four pounds to the acre: for the Ruta Baga or Swedish turnip, about one pound and a half. To quicken vegetation, the beet seed in particular, should be soaked twenty-four hours in warm water.*

There are various methods of field culture recommended and practised by different people. Some sow the seed broad cast: others in rows on level ground, from ten inches to four feet apart: some sow or transplant on moderate ridges, and others on very high ridges.

—

Cabbage.—This vegetable requires a light, rich, and rather moist soil. The seed may be sown about the middle of May, either in a bed for transplanting, or where they are intended to grow. The transplanting should be done when the ground is light, just before a shower, or in cloudy, moist weather, but never when the ground is wet and heavy. Before transplanting, dip the roots into a mixture made of rich mould and water. They should be hoed often while young, at least twice a week; the best time for hoeing is when the dew is on. If lice should appear on the plants, wet them with a strong decoction of tobacco, put on with a small brush, or rubbed on with the hand.

Cabbage should be secured before very cold weather, and their roots buried in the dirt; but never let them rot in a cellar under your dwelling house, unless you wish to destroy the health of your family.

---

* We would strongly urge the soaking of the turnip seed 48 hours in Tanners' oil before sowing. The oil so strongly impregnates the first leaves of the plant, as to keep off the fly, so destructive to it in the early stages of its existence.

Both the beet and turnip for winter feeding, should be sown as late as possible, and yet allow the roots time to mature before the severe frosts set in. This time must not only depend on latitude, but on the season, soil, exposure, &c. &c., which can only be determined from actual experiments by each farmer for himself. It should always, however, be done before the dry, summer weather commences, so as to allow the plants to get a good start and partially shade the ground. **From 15th May to 10th June for beets, and from 20th May to 25th June, is the proper time for sowing the Ruta Baga.**

Cauliflower. This requires the best of rich, light soil. The early kind is most suitable for this climate. It should be sown about the 20th of September, for spring use; and it requires much care to keep them during the winter. For fall use, they may be sown in a hot bed in March, or in the open ground about the 20th of May. They should be protected from the northwest winds by walls or hedges, and great pains must be taken in every stage of their growth, as the extremes of heat and cold operate very unfavorably upon them.

To cook Cauliflower. Cut it when close and white, and of a middling size; cut the stem so as to separate the flower from the leaves below it. Let it lie in salt and water awhile; then put it into boiling water, with a handful of salt. Keep the boiler uncovered, and skim the water well. A small flower will require about fifteen minutes boiling—a large one about twenty. Take it up as soon as a fork will easily enter the stem: a little longer boiling will spoil it. Serve it up with gravy or melted butter.

—

Carrot.—The long orange or red is generally preferred, both for garden and field culture: the short orange is the earliest and deepest color.

Soil. Carrots require a light, mellow soil, with a mixture of sand. The ground should be dug or trenched deep, and well broken up, in order to give plenty of room for the roots to penetrate into the soil; it should also be made fine, smooth and level.

Sowing. As the seeds have a fine, hairy furze on the borders or edges, by which they are apt to cling together, they should be well rubbed between the hands in order to separate them. To forward vegetation, they should be soaked in warm water about twenty-four hours, and then mixed with dry sand, so as to separate them as much as possible in sowing. They should be sowed in a calm time, and scattered as equally as possible.

The seed should be sown in drills about an inch in depth; the rows from eighteen to twenty inches apart, so as to give plenty of room to hoe between them. Some recommend from nine to twelve inches, and others from eight to ten: this may answer in small family gardens, where the land is scarce; but where there is a sufficiency of ground, the carrots are more easily cultivated, and will thrive better and grow larger at a greater distance.

Field culture. The best soil for field carrots is a deep, rich, sandy loam. To obtain a good crop, the soil should be a foot deep at least, and well prepared by very deep plowing and thorough harrowing, so as to make the ground perfectly mellow, smooth and level. It is a matter of importance to wet the seed and cause it to swell, so as to hasten vegetation; because the weeds are apt to start very quick after sowing, and if the seed is not quickened, the weeds will get up and overpower the carrots, before they get large enough to hoe. The seed may be sown in drills, as directed for garden culture or on moderate ridges, from two to three feet apart, and cultivated between the rows with a horse plow. In hoeing, they should be thinned to three or four inches apart in the rows. Two pounds of seed is considered sufficient to sow an acre of ground in drills two feet apart.

Carrots are excellent for fattening beef, and for milch cows. Horses are remarkably fond of them. When cut up small, and mixed with cut straw and given them, with a little hay, it is said they may be kept in excellent condition for any kind of ordinary labor, without any grain.

—

Celery.—The *White Solid* is considered the best kind of celery. We have had the best crops by sowing the seed in the latter part of March, in a hot bed. After the plants have attained the height of about six inches, they may be transplanted into trenches. Select, for this purpose, a piece of rich ground, in an open exposure; lay out your trenches about eighteen inches wide, allowing six feet space between each trench; plow or spade out the earth from the trenches to the depth of sixteen or eighteen inches, if the depth of soil will admit; put about three inches of very rotten manure into the trench; then throw in upon this manure about five inches of the best soil; mix and stir the manure and soil well together; then set your plants by a line in the centre of the trench, leaving a space of four inches between each plant. If the weather be dry, water the plants freely. They should be shaded till the roots strike and the plants begin to grow; the covering should be taken off at night.

When they have attained the height of ten inches, you may commence earthing them up; but never do it while the plants are wet. In performing this, care should be taken to gather all the leaves up with the hand while drawing the earth up equally on each side of the row, being careful to leave the hearts of the plants open. Repeat the earthing once a week or oftener, till about the last week in October; then bury the whole with dirt, to remain till time for digging.

Celery may also be raised by sowing the seed in a rich, moist soil, and removing it into trenches as before directed; or by sowing it in the trenches where it is to grow. As the seed vegetates very slowly, it should be soaked in warm water for twenty-four hours before sowing. To preserve it through the winter, dig it before the ground freezes deep, and pack it away in casks or tubs with dry sand, and keep it in the cellar. Some recommend to cover the ridges with boards, and dig the celery as it is wanted for use. This may answer in a dry, sandy soil; but in a wet or moist soil it is apt to rot and spoil.

—

Corn.—The *Early Canada* is the earliest kind of corn we raise, and is preferred only for being several weeks earlier than the common field corn. The *sweet* or *sugar* corn is the best for cooking in its green state, as it remains much longer in the milk, and is richer and sweeter than any other kind. It is rather later than the common field corn, and is therefore fit for the table when the field corn has become too hard. Alluvial, or any gravelly or sandy soil, if made sufficiently rich and properly cultivated, will produce a good crop. It should not be planted till the weather becomes settled and warm, and the soil sufficiently dry. It may be planted in hills, like the common field corn, or in a garden in drills, like broom corn; as in this way a larger crop may be produced from the same quantity of ground. Care should be taken that no other kind of corn be planted near it, as by intermixing it will soon become adulterated and injure the crop. This corn may be preserved for winter use, by par-boiling it when green, and cutting it from the cob and drying it in the sun. It then affords a wholesome and agreeable dish when cooked like bean porridge, or what is called *succotash.*

—

Cucumber.—The early kinds are most suitable for early planting. For the purpose of obtaining them very early, some plant the seed in a hot bed, or in elevated hills, well manured with rotten horse-dung, and covered with glazed frames. But in order to grow fair, handsome cucumbers, the soil should be rich, light and warm, and well mixed with rotten manure; or a good shovel full may be put into each hill, and thoroughly mixed with the soil in the hill. We generally plant the early kinds about the first of May, in hills about four feet apart each way, elevating the hills above the level of the ground. Put in six or eight seeds into each hill, and cover them half an inch deep with fine dirt, and, as in all other planting, press the earth a little over the seeds with the back of the hoe.

When the plants are up, examine them closely, as they are frequently attacked by the yellow bug or fly. To prevent this, take rye flour, sifted ashes and ground plaster, equal parts of each, well mixed together, and dust the plants all over with it. If the plants are dry, sprinkle them with water before you dust them. Snuff, tobacco dust, or the stalks boiled in water, soot, or a decoction of elder and walnut leaves, are all very good to prevent small bugs and insects from injuring any young plants. Keep the ground loose and clear of weeds, and in dry weather water your plants freely. After they have attained a vigorous growth, and the danger of insects is over, they may be thinned out, leaving two of the most thrifty in a hill.

Those intended for pickling may be planted from the 10th to the 20th of June. If the soil is rich and warm, the 20th is preferred. The long kinds are preferred by some for pickles. The cultivation and management of these is the same as the others, excepting that the hills should be at least five feet apart each way. Some recommend nipping off the first runner bud of cucumbers and melons, from an idea that they will become more stocky and fruitful.

—

Lettuce.—Lettuce requires a mellow soil. It should be sown as early in the spring as possible: to insure a very early supply, it may be sown late in the fall—it will then start early in the spring; but to obtain a constant and regular supply through the season, it should be sown every month from March to September. It may be sown broad-cast, moderately thin, or in rows from twelve to eighteen inches distant, according to the usual size of the different kinds. Rake in the seed lightly, with a fine tooth garden rake. When the plants are up, stir the ground lightly while it is dry, and clear out the weeds: thin the plants where they crowd each other. Those intended for large heads should stand eight or ten inches apart: the hardy kinds, such as the *early green*, *early curled* and *ice coss*, may be sown in September, and covered with straw at the approach of severe weather. Or any kind may be sown in a hot bed in March, and transplanted in the open ground at the proper season.

—

Melon.—This plant requires a warm gravelly or sandy soil, made very rich with well rotted manure from the hog pen, or rich old compost, well mixed with the soil. The hills may be formed after the manner recommended for cucumbers. But if the natural soil is not sufficiently warm for melons, then dig a hole of sufficient size, and put in a large shovel full of rotten horse dung; upon this put the compost or rotten horse dung, with a quart of slacked lime: then add some good mellow soil, and mix it up well on the surface without disturbing the horse dung at the bottom. The hills may be made from six to eight feet apart; for water melons, on rich, warm land, where they grow most thrifty, nine feet is near enough.

Plant about the middle of May, if the weather be warm and the ground in good order. The seed should be soaked a few hours in warm milk and water, with a little soot in it. Put six or eight seeds in a hill, and cover half an inch deep. When the plants become strong and thrifty, so as to be out of danger, pull out the weakest, leaving only two in each hill; indeed one would always be sufficient, if secure from all accidents. The ground should be often hoed round the hills, and kept loose and light. If you would raise good melons, you must plant them remote from any other vines; for in the vicinity of cucumbers, squashes, pumpkins, gourds and the like, they will infallibly degenerate. In this respect, therefore, they require great care and attention. To secure them from insects, pursue the directions given for cucumbers.

—

Mustard.—The white and broad-leaf kinds are excellent for salad or greens. They should be sown very early in the spring, in a rich, warm soil, in shallow drills, ten inches apart, and kept clean from weeds. After the crop is off, the ground may be planted with cucumbers for pickling, or used for a succession of salad or radishes. The brown mustard seed is the best for grinding; it is a palatable and healthy condiment, and may be sown broad-cast or in drills, and kept clean from weeds.

—

Onion.—Onions require a rich, mellow soil, rather moist and sandy or gravelly. A heavy clammy, or a dry clayey soil will not do for them. They grow well on alluvial soil, such as is made by the overflowing of rivers and streams, or from the wash of hills. The ground requires to be well worked and made completely mellow by plowing and harrowing, and then raked over with an iron tooth rake, so as to break the clods and pulverize the soil. If not sufficiently rich, it may be made so by a plentiful supply of good manure, well rotted. Dung from the hog pen is considered the best manure for onions; though any rich and well rotted manure will answer. The manuring must be repeated annually; because onions have a great tendency to impoverish the soil; but if well manured, they will do better on the same ground every year. The manure may be put on in the fall and plowed in. Plow the ground again in the spring, as early as it can be done after the frost is out. Work it over thoroughly, and prepare it for sowing as early as the season will admit.

When the ground is sufficiently leveled and pulverized, stake out your rows, draw your garden line, and make your drills about 16 inches apart, so as to afford sufficient room for hoeing between the rows. The drills should not be more than an inch in depth; if the ground is moist, three-fourths of an inch will answer. The seed (if good) should be sowed sparingly. Many are very apt to put in too much seed, and of course, must thin out a large portion, or have a crop of small onions. Good seed, well put in, will not fail to come up well. After the seed is in, rake lightly over the drills, lengthwise; and when the seed is all covered, if you have a small light garden roller, (which should be kept in every garden,) draw it carefully over the bed from end to end of the rows, till the whole is rolled. If you have no roller, take a long board and lay it lengthwise on the rows and walk on it; then move it to the next row, and proceed on in this manner till the whole bed is pressed. This will make the seed come up more even and equal.

When the onions are fairly up, the weeding and hoeing should be immediately attended to. If they are too thick, thin them out so as to let them stand two or three inches apart; but this should be carefully done, so as not to disturb those that remain. It is better to do the thinning by degrees, at each successive hoeing, rather than all at once, as the little black grubs will sometimes thin them off too rapidly. The ground must be often hoed and kept clean of weeds, or they will not do well.

Onions will sometimes run to scallions, having a thick, stocky neck and little or no bulb. To prevent this, some recommend breaking the tops down, when they have attained their full growth. But if the ground is suitable and well prepared; if good seed is sown, and properly cultivated, there is little danger of scallions; besides it is not a very good practice to break the tops down. The onions will be ripe in September. When the tops are sufficiently dry, pull the onions and let them lie a few days in the sun to dry; then gather them up and house them. They may be kept through the winter, by spreading them on shelves in a cool dry cellar. Some prefer bunching them up, which is a very good plan to keep them dry. A damp warm cellar will cause them to sprout and rot, which should be avoided.

—

Parsley.—This plant should have a good rich soil, and may be sown at almost any time. For early spring use it is sometimes sown late in the fall, and the ground covered with straw; it is also sown early in the spring—also in March, April, May or June. But as the seed vegetates slowly, it should be soaked in warm water from twelve to twenty-four hours. In order to hasten vegetation, some recommend mixing sulphur with the water. If sown in the spring and frequently cut, the plants shoot up more thick and stocky, and afford a plentiful supply through the whole season. It should be kept free from weeds.

To be continued.

TOP DRESSING ON GRASS.

The Dressings detailed below were applied to 8 plots 1st May, the grass cut 1st July, hay weighed 19th July.

APPLICATION.	I. Experiment—good light soil, subs. gravel.										II. Experiment—clay soil, subsoil dry.									
Manures used, and quantities applied, to each plot of 1-20th of an acre.	Weight on 1-20th of an acre in pounds.	Increased weight on 1-20th of an acre.	Total produce per Imperial Acre.				Total additional weight per Imperial Acre.				Weight on 1-20th of an acre in pounds.	Increased weight on 1-20th of an acre.	Total produce per Imperial Acre.				Total additional weight per Imperial Acre.			
			ts.	cwt.	qrs.	lbs.	ts.	cwt.	qrs.	lbs.			ts.	cwt.	qrs.	lbs.	ts.	cwt.	qrs.	lbs.
1lb. sulphuric acid, diluted in 47 galls. water..	271	44	2	8	1	16	..	7	3	12	256	26	2	5	2	24	..	4	2	16
6lbs. saltpetre (nitrate of potash)........	322	95	2	17	2	..	..	16	3	24	286	56	2	11	..	8	..	10	..	..
6lbs. nitrate of soda........	339	112	3	..	2	4	1	..	..	..	282	52	1	10	1	12	..	9	1	4
6lbs. sulphate of soda (Glauber salts)........	292	65	2	12	..	16	..	11	2	12	232	2	2	1	1	20	..	..	1	12
17lbs. gypsum........	254	27	2	5	1	12	..	4	3	8	240	10	2	2	3	12	..	1	3	4
One bushal wood charcoal (pounded)........	277	50	2	9	1	24	..	8	3	20	257	27	2	5	3	16	..	4	3	8
One-quarter bushel common salt, 25 gallons water........	294	67	2	12	2	..	..	11	3	24	269	39	2	8	..	4	..	6	3	24
One gallon ammoniacal liquor, 47 gallons water........	277	50	2	9	1	24	..	8	3	20	201	..	1	15	3	16	..	..	..	..
No application........	227	..	2	..	2	4	..	..	..	..	230	..	2	1	..	8	..	..	..	..

The above experiments were made by Prof. Johnston. Several of the applications here enumerated, will not be resorted to, probably in this country; but the results of *gypsum, charcoal, and salt,* commend themselves to the consideration of every thinking farmer. We hope to be able at the and of this season to give the results of similar trials from our own countrymen on this interesting subject.

—

Potatoes, by planting early, have time to grow and shade the ground before the extreme heat comes on to check them; and this one circumstance is oftentimes the cause of securing the crop. The land is prepared by an autumnal ploughing, and sometimes two, when requisite; so that when the furrow came to be turned on to the sets, it mouldered over them like ashes, the dung having been carried on to the land during the frosts of winter, and spread when the season would admit. The business of planting commenced by throwing out a furrow, in which the sets were placed about fourteen or fifteen inches distant, then came boys with rakes, pulling in upon them the dung from the land designed for the two next furrows, when the planters again followed, and then the raker. Thus the land was planted in every alternate furrow, in which only the dung was placed. After the field was planted, it was well harrowed, and very carefully spread with a thick coat of lime that had been slaked on the ground by being covered, a basketful in a heap, by throwing a little earth on it, which effected the business in a surprisingly short space of time, and in the most complete manner; and a single flat-hoeing of the weeds, completed the labor until the time of taking up, unless, perhaps, the pulling by hand a few single weeds, that might have escaped the operation of the hoe. The crop was generally taken up by the plough, and always proved very superior to those that were planted by any other mode, especially in seasons of drought, when the common system of moulding up is attended by very uncommon injury to the crop. My potatoes were always of a very regular size, with no small and ill-formed roots or small tubers growing to the larger ones; those being occasioned by moulding up the crop while growing, which operation forcing on another start in vegetation, it expends itself in the formation of small and incipient tubers, to the very great deterioration of the crop and its delay in ripening. I always selected my seed from the finest potatoes that I could obtain at any price, cutting one eye only to a piece, and planting as soon as cut; and in this way I have raised more than 700 bushels per acre, with far less labor and expense than others have bestowed on crops of less than half that quantity, and of very inferior quality. *A good coat of lime*, spread on the land after planting the potatoes, operates surprisingly: first, as destroying the worms and grubs; second, by its antiseptic property, retarding the action of the dung, and preventing it from giving forth its whole powers during the early growth of the crop—preserving it until the time of ripening, when the most of its vigor is required; and, third, in preventing a surface-growth of weeds, which I am convinced that it does in a remarkable manner. And all this is effected by the water which percolates through the surface-soil after every rain. In every way its use is great, but in none more than in the benefit which it yields to the following crop, which ought always to be oats, seeded with clover; my custom being, as soon as the potatoes are removed, to plough up the ground into wide ridges, called reaches, so to lie all winter, and on this surface, without another ploughing, to harrow in the oats, four bushels of seed per acre, in February, if the season will admit.

I find that some person declares that he has found the largest crops of potatoes to be raised from the stalk-end of the tuber. Now this is contrary to all my experience, having always found the best and earliest crops to spring from the eye-end of the potato—a larger yield and an earlier harvest by two or three weeks; the quality also being very superior. From an experiment which I made with the thin cuttings from the eye-end of the potato, taken off while preparing for cooking, (the pieces often not larger or much thicker than a twenty-five cent piece,) I have raised the best crop that I ever grew, uniform in size and early in growth; the slices weighing at the time of planting 100 pounds, the crop on taking up weighing 2240 pounds.—*Far. Cab.*

Seed Potatoes.—Our own observation and experience justify us in saying, that, in equality of soil, manure, and culture, the product of large potatoes will always greatly exceed that of small imperfect ones, though of the same variety. We recollect, upon one occasion, to have bought a lot of thirty bushels of refuse potatoes, because of their *cheapness*, for planting, which we treated with every possible care, so far as manure, preparation of the soil, and after-culture were concerned. The product of this lot were like their parents, perfect dwarfs, small alike in vines and tubers, and appearing from the beginning not to possess the requisite vigor to insure healthful vegetation. We made, from a planting of ten bushels of the same variety of the potato, which we selected in consequence of their great size, planted in similar ground, and treated in all respects alike as to manure and culture, the same season, six times as many roots as from the first parcel. And while the first were, from their diminutive size, too small for anything but to feed stock, the latter were as large roots as any farmer need desire to raise; many of them weighing one and three-fourth pounds, and the greater portion from six ounces to a pound.—*Amer. Far.*

Sweet Potatoes.—Make a bed of long manure from eight to twelve inches thick, surrounding it with a rough frame of boards. Put three or four inches of mould over the manure; split the potatoes and lay them thick on the mould, and cover with four inches of mould. As soon as the sprouts begin to come above the ground, draw them, laying one hand on the potato to keep it in place. The sprouts must be drawn as they come up, as long as the planting season remains. They are to be set out in the hills after a rain, two sprouts in a hill, or in rows fourteen inches apart. By commencing early, a bushel of seed potatoes will plant an acre. This plan is decidedly preferable to planting the potato itself. When nights are cold, boards must be laid across the bed. In making the bed, the manure may be omitted by those who do not like the trouble, but the sprouts will come forward much later. The bed, in dry weather, must be frequently watered.—*Lou. Journal.*

Fruit Trees.—Be careful in planting to give the trees a fair chance for life and health, by digging the holes in which they are set, wide and large, so that they may be surrounded by loose earth, that can be easily penetrated by the tender fibres of the roots which are to convey nourishment for their sustenance and growth. A tree properly planted will grow as much in five years as one carelessly and badly set in will in ten; and often the chance of survivorship is dependent on slight circumstances.

An excellent plan for preventing young fruit trees from becoming hide-bound and mossy, and for promoting their health and growth, is to take a bucket of soft soap, and to apply it with a brush to the stem or trunk, from top to bottom; this cleanses the bark, destroys worms or the eggs of insects; and the soap, becoming dissolved by rains, descends to the roots, and causes the tree to grow vigorously. A boy can make this wholesome application to several hundred trees in a few hours. If soft soap was applied to peach trees in the early part of April, to remove or destroy any eggs or worms that might have been deposited in the autumn, and again in the early part of June, when the insect is supposed to begin its summer deposites of eggs, it is believed we should hear less of the destruction of peach trees by worms. But the application should *not be suspended* for a single season, on the supposition that the enemy had relaxed in his hostility.—*Far. Cab.*

Lice on Cattle.—1. *Mercurial ointment*, rubbed on the animal from the crown of the head to the root of the tail, down the back bone, will effectually kill lice in a day or two. This, however, is a dangerous remedy to use, unless the animal is kept in the stable, and requires great care to preserve him from the effects of cold and wet.

2. *Corrosive sublimate* is another effectual remedy. This is to be applied, as before prescribed, but, like number 1, is dangerous.

3. *A strong decoction of larkspur* is also a sure and safe remedy. This should be applied as recommended for number 1.

4. *Spirits of turpentine* is also a sure remedy. It should be applied as number 1.

5. *A decoction of tobacco*, applied as number 1, will destroy the lice.

6. *A mixture of Scotch snuff and fish oil*, rubbed on the affected parts, will destroy the lice.

7. *A mixture of soft soap and Scotch snuff*, well rubbed on the parts, will also eradicate them.

As an auxiliary to whatever remedy may be used, the currycomb and brush should be freely applied, after a day or two, in order that the hide and hair of the animal may be kept *clean*. No animal which is well fed, and daily curried and brushed, will either breed or retain lice; the latter operation, however, few who have much stock can regularly attend to.—*Am. Far.*

A small quantity of *green sage*, placed in the closet, will cause *red ants* to disappear.

Candles.—Prepare your wicks about half the usual size, wet with spirits of turpentine, put them in the sun until dry, then mould or dip your candles.

Candles thus made last longer, and give a much clearer light. In fact they are nearly or quite equal to sperm, in clearness of light.

Panes of Glass may easily be removed by the application of soft soap for a few hours, however hard the putty has become.

Jerusalem Artichoke. (*Helianthus tuberosus.*)—It flourishes most in a rich light soil, with an open enclosure. The only mode of propagation is by planting the middle-sized tubers or cuttings of the large ones, one or two eyes being preserved in each. These are best planted towards the end of March, though it may be performed as early as February, or even in October, and continued as late as the beginning of April.

They are planted by the dibble, in rows, three feet by two feet apart, and four inches deep. The only attention necessary is to keep them free from weeds, and an occasional hoeing, to loosen the surface, a little of the earth being drawn up about the stems. Some gardeners, at the close of July, or early in August, cut the stems off about their middle, to admit more freely the air and light; in other respects it may be beneficial to the tubers.

The tubers may be taken up as wanted during Sept.; and in October, or as soon as the stems have withered, entire for preservation in sand, for winter's use. They should be raised as unbroken as possible, for the smallest piece of a tuber will vegetate, and appear in the spring.

(*Johnson's Kitchen Garden.*)

REVIEW OF THE MARKET.

Prices Current in New-York, April 20, 1842.

ASHES, Pots, per 100 lb.	$5 87½	to 6 00
Pearls, do.	5 50	5 62
BEESWAX, Yellow, per lb.	29	31
COTTON, Louisiana, do.	5½	10¼
Upland, do.	5¼	9¼
Florida, do.	5¼	8¾
Alabama, do.	5½	10½
FEATHERS, American, live, per lb.	30	35
FLAX, American, per lb.	7½	8
FLOUR, Northern and Western, via Erie Canal, per bbl.	6 18¾	6 3¼
do. via N. Orleans,	5 87½	5 93¾
Southern, per bbl.	5 75	6 00
RYE, per bbl.	3	3 25
MEAL, Corn, per bbl.	3 00	3 12½
do. per hhd.	14 50	15 00
WHEAT, Western, per bushel,	1 26	1 28
Southern, do.	1 18	—
RYE, Northern, per bushel,	60	61
CORN, do. do.	62½	64
Southern, do.	58	59
BARLEY, per bushel,	75	—
OATS, Northern, per bushel,	43	48
Southern, do.	40	43
PEAS, Green, do.	1 12	1 15
Marrowfat, for seed, per bushel,	1 40	1 46
BEANS, White, per bushel,	1 00	1 40
CLOVER SEED, per lb.	7	8½
TIMOTHY SEED, per tierce of 7 bu.	14 00	16 50
FLAX SEED, rough, do. do.		11 50
clean, do. do.		13 00
RICE, per 100 lb.	2 25	3 25
HEMP, Russia, per ton,	237 50	—
American, do.	—	—
HOPS, first sort, per lb.	12½	14
LEAD, Pig, per lb.	3¼	3½
Sheet and Bar, per lb.	5½	—
OIL, Linseed, American, per gal.	80	86
PLASTER OF PARIS, first quality, per ton,	2 50	2 62
BEEF, Mess, per bbl.	7 25	8 00
Prime, do.	4 00	4 50
Cargo, do.	2 75	—
PORK, Mess, do.	7 12	9 00
Prime, do.	5 25	7 75
LARD, per lb.	5½	6½
BUTTER, best Table, per lb.	18	21
Western, good, per lb.	12	14
Shipping, do.	7	8
CHEESE, in boxes and casks, per lb.	7½	9½
HAMS, Smoked, per lb.	6½	7½
Pickled, do.	4	4½
BEEF, Smoked, do.	4	6½
SUGAR, New Orleans, per lb.	3	5½
TOBACCO, Virginia, do.	3	6
Kentucky, do.	2½	6½
TALLOW, American, do.	6	8
WOOL, American Saxony fleece, per lb.	38	40
Full blood Merino do. do.	32	34
Half to three-fourths do. do.	28	30
Native to half do. do.	18	26
SHEEP PELTS, each,	35	80
FAT CATTLE, per 100 lbs., prime	7 00	7 75
Inferior, do.	4 00	6 00
Do. SHEEP, each,	1 50	5 50
HAY, unpacked, per 100 lbs.	75	93¾
APPLES, per bbl.	3 00	3 50
POTATOES, best, per bushel,	28	31
EGGS, per 100,	95	

Remarks.

The market generally continues very dull.

Flour and Meal.—English advices to April 2d, represent their market dull. Sales were making in bond at 26s 6d to 27s.

The demand in this city is extremely dull. Richmond city is scarce and wanted. Exports from 1st to 13th April, 6,157 bbls.

Wheat is scarce and wanted.

Corn comes in slowly, and there is considerable demand for Eastern ports.

Beef and Pork are without change and very dull.

Clover Seed is in request for home consumption, and Timothy is scarce and still continues enormously high. We think our Farmers will consult their own profit, as well as the general interests of the community by preparing this article more abundantly for the market. The price has been excessively great for the last 2 years.

When shall we have *American Hemp* to add to the quotations in our market?

GREAT SALE OF
DURHAM CATTLE,

Near Cincinnati, Ohio, on THURSDAY, 30th JUNE, 1842.

THE Subscriber will sell at Auction, at his farm, six miles from Cincinnati, on Thursday the 30th day of June next, his ENTIRE STOCK of Improved Short Horn Cattle, numbering in all 27 Head.

The sale will commence at 10 o'clock A. M. and continue until *all are sold.*

The terms of sale will be for all sums over $100, 12 months credit, with the privilege of *two* years, with interest on the second year, and approved security.

Arrangements can be made on reasonable terms, to have the cattle that are purchased, kept at the risk of the purchaser, until fall if required.

JOHN MAHARD, JR.

BULLS.—PEDIGREES.

No. 1, **Prince Frederick**, (for portrait see No. 7, vol. 2, of Western Farmer and Gardener,) a rich roan; calved 28th Sept. 1837, got by Ohio; d. Octavio by Denton; gr. d. Sylvia by San Martin; gr. g. d. Mrs. Mott, imp. in 1817. *Ohio* got by Mercutio, d. Mandane, (bred by Mr. Baker of East Layton, selected and purchased in England by Col. Powell, in 1830,) by Richmond; g. d. Mary Ann by North Star; gr. g. d. by Mr. Allison's son of Sir Dimple; gr. gr. g. d. by Sir Dimple; gr. gr. gr. g. d. by Layton; gr. gr. gr. gr. g. d. by Styford; gr. gr. gr. gr. gr. g. d. by Colling's Lame Bull.

Mercutio, sire of Ohio was got by Adonis; d. Zulinda by Malcolm; g. d. Desdemona by Frederick; gr. g. d. Delia by Cleveland; gr. gr. g. d. Red Daisy by Major; gr. gr. gr. g. d. by Windsor; gr. gr. gr. gr. g. d. by Punch; gr. gr. gr. gr. gr. g. d. by Hubback.

Adonis, got by Malcolm, imported by Mr. Powell. (See English Herd Book for all these noble animals on the sires side of Prince Frederick.)

Denton, got by Champion; d. Lady Munday by San Martin; g. d. Mrs. Mott imported.

No. 2. **Napoleon**; red and white; calved 9th Oct. 1838; got (in England) by Fantastical; d. Fortuna by Reformer, (2512); g. d. Florence by Lindrick, (1170); gr. g. d. Florence by Sir Alexander, (591); gr. gr. g. d. by Star (618); gr. gr. gr. g. d. by Snowball; gr. gr. gr. gr. g. d. by Sir Dimple (594).

Fantastical, got by Bulmer (1760); d. Fan by Harpham (1098); g. d. Delicacy by Ketton (346), gr. g. d. by Expectation (247); gr. gr. g. d. by Magnum Bonum (2882); gr. gr. gr. g. d. by Harry Chapman's Bull; gr. gr. gr. gr. g. d. by Ralph Grimston's Bull; by a Son of Dalton Duke (188).

No. 3. **Marion.** Calved Dec. 1840; got by Prince Frederick, (as in No. 1 Bulls); d. Fortuna (as in No. 1 Cows).

No. 4. **Fantastical.** Calved Dec. 1840; got by Napoleon (as in No. 2 Bulls); d. Duchess by Denton; g. d. Speckled Durham by Cornplanter; gr. g. d. Durham by Champion.

Cornplanter, got by imported Tecumseh; d. Lady Munday by San Martin; g. d. Mrs. Mott.

No. 5. **Franklin.** (9 months old;) got by Napoleon (as in No. 2 Bulls); d. Ariaden by Ohio (as in No. 1 Bulls); g. d. Duchess (as in No. 4 Cows).

No. 6. **Albion.** (4 months old;) got by Berryman; d. Juno by Scrip (2604); g. d. Whitworth by Miracle (2320); gr. g. d. by Volunteer (2806); gr. gr. g. d. by a son of Remus (550).

Berryman, (imported in 1838 by Messrs. Neff & Lawrence —for portrait see No. 6, vol. 2 of Western Farmer and Gardener); got by Henwood (2114); d. Minniken by Wharfdale (1758); g. d. Minna by Nestor (452); gr. g. d. Minerva by Harold (291); gr. gr. g. d. Mary by Meteor (432); gr. gr. gr. g. d. Magdalene bred by Mr. C. Colling, by Comet (155); gr. gr. gr. gr. g. d. by Cupid (177).

No. 7. **Pilot.** (4 months old); got by Berryman (as in No. 6 Bulls); d. Duchess (as in No. 4 Cows.)

No. 8. **Pym.** (4 months old); got by Berryman (as in No. 6 Bulls); d. Adelaide (got in England) by Sir Walter (2639); g. d. Juno (as in No. 3 Cows).

COWS AND HEIFERS.

No. 1. **Fortuna.** (Imported roan, calved 26th August, 1835); got by Reformer (2512); d. Florence by Lindrick (1170); g. d.

Florence by Sir Alexander (591); gr. g. d. by Star (618); gr. gr. g. d. by Snowball; gr. gr. gr. g. d. by Sir Dimple (594).

Reformer, got by Young Fairfax (1991); d. Beauty by Imperial (2151); g. d. Beauty by Favorite (1030); gr. g. d. Beauty by Young Dimple (971); gr. gr. g. d. Daisy by Wellington (678); gr. gr. gr. g. d. Beauty by Duke alias Young Comet (905); gr. gr. gr. gr. g. d. by Layton a son of Mr. Charge's Grey Bull (872); gr. gr. gr. gr. gr. g. d. by Eclipse, a son of Mr. James Brown's White Bull (98).

No. 2. Lady Ann. (Imported, spotted roan, calved 8th April, 1836); got by Magnum Bonum (2243); d. by Linton; g. d. by Jupiter (343); gr. g. d. by Easby (232).

Magnum Bonum, got by Charles 2 (879); d. by Rob Roy (557); g. d. by Marshal Blucher (416); gr. g. d. a Cow of Mr. Wright's of Cleasby.

Linton, got by Richmond (1380); d. Cyntha by Remus (550); g. d. Arbutus by Comet (155—one thousand guineas). For portrait see No. 4 of vol. 2 of the Western Farmer and Gardener.

No. 3. Juno. Imported, roan, calved in January 1836; got by Scrip (2604); d. Whitworth by Miracle (2320); g. d. by Volunteer (2806); gr. g. d. by a son of Remus (550).

Scrip, got by Baronet (1686); d. Premium by St. Albans (1412); g. d. by Waverly (2819) &c.

No. 4. Duchess. Red, 8 years old last spring; got by Denton; d. Speckled Durham by Cornplanter; g. d. Durham by Champion.

Cornplanter, got by imported Tecumseh; d. Lady Munday; she was by San Martin, out of Mrs. Mott.

Denton, got by Champion; d. Lady Munday by San Martin; g. d. Mrs. Mott imported.

No. 5. Kate Kearney. Red and white, calved 9th April, 1838; got by Proclamation; d. Florida by Young Bolivar; g. d. Pennsylvania by imported Bolivar (804); gr. g. d. by imported Gloucester (1014); gr. gr. g. d. by imported Champion (864); gr. gr. gr. g. d. by Young Comet.

Proclamation, got by Denton; d. Sylvia by San Martin; g. d. Mrs. Mott imported.

Young Bolivar, got by imported Bolivar (804); d. (Dr. Roger's Beauty) by imported Gloucester (1014); g. d. (Dr. Roger's Silver Skin) by imported Champion (864).

No. 6. Ariaden. Red, some white spots; calved 27th July, 1838; got by Ohio (as in No. 1 Bulls); d. Duchess (as in No. 4 Cows).

No. 7. Empress. White, calved 11th Dec. 1838; got in England by Barforth; d. Lady Ann (as in No. 2 Cows).

Barforth, got by Acmon (1606); d. by Young Rockingham (2547); g. d. by Wonder (2853); gr. g. d. by Wellington (678); gr. gr. g. d. by Mars (412); gr. gr. gr. g. d. by Ladrone (353); gr. gr. gr. gr. g. d. by Sweepstakes (637).

No. 8. Adelaide. Red with some white spots; calved 13th Oct., 1838; got in England by Sir Walter (2639); d. Juno (as in No. 3 Cows).

Sir Walter, got by Miracle (2320); d. Premium by Snowdrop (2653); g. d. by St. Albans (1412); gr. g. d. by Waverly (2819); Washington (675.)

No. 9. Verbina. Got by Baron Steuben; d. Duchess (as in No. 4 Cows).

Baron Steuben, got by Sam Patch; d. Hyacinth by imported Tecumseh; g. d. Tulip by Meranda, out of Lady Munday; Lady Munday got by imported San Martin, and out of Mrs. Mott imported.

No. 10. Miranda. Red with some white spots; calved 15th April, 1839; got by Berryman (as in No. 6 Bulls); d. Florida (as in No. 11 Cows); for portrait see No. 8, vol. 3, of the Western Farmer and Gardener.

No. 11. Florida. Roan, calved 1st April, 1836; got by Young Bolivar; d. Pennsylvania by imported Bolivar (804); g. d. by imported Gloucester (1014); gr. g. d. by imported Champion (864); gr. gr. g. d. by Young Comet.

Young Bolivar, got by imported Bolivar (804); d. (Dr. Roger's Beauty) by imported Gloucester (1014); g. d. (Dr. Roger's Silver Skin) by imported Champion (864). For portrait see No. 7, vol. 3, of the Western Farmer and Gardener.

No. 12. Lady Ellen. 1 year old; got by Prince Frederick (as in No. 1 Bulls); d. Juno (as in No. 3 Cows).

No. 13. Blandina. 1 year old; got by Prince Frederick (as in No. 1 Bulls); d. Florida (as in No. 11 Cows).

No. 14. Venus. 1 year old; got by Napoleon (as in No. 2 Bulls); d. Kate Kearney (as in No. 5 Cows).

No. 15. Queen of the West. 9 months old; got by Prince Frederick (as in No. 1 Bulls); d. Lady Ann (as in No. 2 Cows).

No. 16. Anna. 9 months old; got by Napoleon (as in No. 2 Bulls); d. Verbina (as in No. 9 Cows).

No. 17. Livinia. 4 months old; got by Clarkson's Colossus; d. Fortuna (as in No. 1 Cows).

Colossus, got in England by Colossus (1847); d. Minna by Edmund (1954).

No. 18. Celestina. 3 years old; got by Berryman (as in No. 6 Bulls); d. Juno (as in No. 3 Cows).

No. 19. Princess. 2 weeks old; got by Neff's Prince William; d. Florida (as in No. 11 Cows).

Prince William, imported; got by Majesty (2250); d. Ruby by William (2839); g. d. by Wellington (2824); gr. g. d. by Blaine (75); gr. gr. g. d. by the Lame Bull (358); gr. gr. gr. g. d. by Bolinbroke (86).

A number of the Cows are now in calf to Prince William, Napoleon, and Prince Frederick.

THE FAST TROTTING
HORSE BELLFOUNDER.

Will stand at Middletown, Butler Co., Ohio, this year at $8 for the season. He is a bright blood bay, with black legs, mane and tail; is 16 hands high, and weighs 1200 lbs. He has proved himself a first rate stock horse, some of his colts having sold near N. York for $1000. He has trotted his mile in 2 min. 45 sec., and is every way a sound and desirable horse, his colts being equally adapted to the road and heavy farm work. Address Dr. ANDREW CAMPBELL as above.

R. H. HENDRICKSON,
MIDDLETOWN, BUTLER COUNTY, OHIO,

Is now prepared to fill orders for thorough-bred Berkshire Pigs, from the late imported boars Windsor Castle, Earl Craven and Sultan, and twenty choice sows purchased of A. B. Allen, a part of his recent importation. Pigs in pairs from this superior stock will be furnished substantially caged and delivered on the canal at Middletown, or on board steamboat at Cincinnati, from $30 to $50 according to age and quality. Orders accompanied with cash, will always secure the preference.

ALSO—Pigs bred from the superb boar Kenilworth, of a stock of the largest and finest kinds of white hogs in England, also imported by Mr. Allen last October, crossed on the splendid large white Miami hogs of this country. The Miamis have been long noted for their large sizes. Animals of this breed have occasionally come up to the enormous weights of 1200 and 1400 lbs, and it is believed that the cross of Kenilworth on them, will easily attain the weights of 700 to 1000 lbs at 18 months and two years old, if well fatted. Pigs of this cross $25 per pair caged and delivered as above.—Refer to the editors of this paper.

Dr. FEUCHTWANGER

Begs leave to inform the Agriculturists, that experiments are now instituting in various parts of the country for testing the virtues of his Seed Protector, a powder, sufficient of which is afforded for 3s. for 2 quarts of seed, which will preserve the seed of Corn, Rye, Oats, Wheat, Peas and other vegetables from the attack of the grubworm, and prevent all other insects, caterpillars and butterflies from touching the sprouting plant. He is desirous of having it fairly tested and will therefore be willing to let any farmer have a sample for experimenting. A Preparation to destroy all the insects infecting the fields and trees and indigenous and exotic plants, may likewise be had for 2s.

By addressing him at No. 1 Wall-st., any information on his favorite science of Scolicotoxicology, will be given with despatch.

M. L. SULLIVANT, of COLUMBUS, Ohio, has for sale Short Horn Cattle, Mules, Leicester Sheep, and Berkshire Pigs.

Contents of this number.

Editorial.

The Improvement of Home-bred Stock - - 33
Application of Manure - - - - - - 36
Gypsum—Correspondence and reply - - 37
New method of procuring fruit trees—Tour in England, No. 2. - - - - - - 38
Relative value of manures - - - - - 42
Enquiry as to Merinos and other sheep—Grade Short Horns and Ayrshires—Mode of increasing the potatoe crop—Soaking corn in saltpetre—Destroying the peach worm - - 43
Protection of Home Industry - - - - 44
Large sale of Short Horns—Preserving grapes fresh—Dr. Dana's Muck Manual—Receipt of English works—Acknowledgments to the Agl. and other press—N. Haven Horticultural and and N. Haven Co. Agricultural Society - 46
Ladies' Department—Flowers—their uses - 47
Botany—Blue Bells (Selected) - - - - 48

Correspondence.

Silk raising, by Octogenaria, No. 2. - - 48
The Connecticut Valley—Scenery—Cattle, sheep farming, roads—Northampton, by L. F. A. 49
Destruction of vegetable insects by Dr. Feuchtwanger—Large weight of Pork by S. Homer 52

Selections.

Comparative feeding qualities of beets and turnips, by Earl Spencer - - - - 53
Cultivation of mangold wurtzel by Wm. Miles - 54
Facts on food and manures—Making butter - 55
The Kitchen Garden—Asparagus—Beans, &c. 56-60
Experiments on grass with top dressings–Potatoes 61
Sweet potatoes—Fruit trees—Lice on cattle, &c. 62
Review of the Market—Advertisements - 63

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthy, the most useful, and the most noble employment of Man.--*Washington.*

Vol. I. New-York, June, 1842. No. 3.

A. B. Allen, and R. L. Allen, Editors. Geo. A. Peters, Publisher, 36 Park-Row.

"THE AMERICAN AGRICULTURIST" will be published Monthly, each number to contain thirty two pages, royal octavo.

Terms.--One Dollar per annum payable strictly in advance.

Six Copies will be sent for $5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside

Twenty five Copies will be sent for $20, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, No. 36, Park Row, New-York.

☞**Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

Pruning and Care of Fruit Trees.

The proper season for pruning fruit trees is still a disputed question. Some of high authority, contend it should be done in mid winter, or at any time when vegetation is not in progress. Others claim that the only proper season is when the sap begins to flow freely in the spring, and before the buds have become fully developed. A third class, among whom we must rank ourselves, insist that it should be done after that period when the excessive flow of thin and watery sap has subsided, and the leaves have fully matured, which happens in this latitude, from the 20th June to 15th July. For this last opinion, there are two important advantages: 1st. There are no obtrusive young shoots pushing themselves forward where the branches are lopped off, as at other times: and 2d, the wounds made in pruning are immediately covered with a thick gummy sap, which, by effectually shutting up the pores of the wounded limb, secure a rapid healing of the part, and a re-covering by the extension of the bark from every side till it meets and is effectually joined in the centre. These reasons are conclusive with us, and we think should be so with our readers, until they can show some better for the contrary practice.

The cause assigned, for the effectual protection and speedy recovery of the maimed part, by some, who have supposed they were speaking philosophically on the subject, is altogether a mistaken one. They assume two distinct periods during the existence of the summer foliage, one the ascent, or upward flow of the sap; the other its downward course, or descent to the roots. Let us correct this misapprehension here. The sap *circulates* throughout the entire length and breadth of the tree, from the minutest spongioles of the root, invisible to the naked eye, up to the farthest point of the topmost leaflet; just as the blood courses through the animal system. In the tree, the leaves are the lungs, the principal respiratory organs that change the character of the fluid, giving out oxygen and inhaling carbon from the atmosphere; though the bark of the fresh shoots perform this office to no inconsiderable extent, and at all times, at every period of the tree's life, there is an intimate and vital connection of the bark with the surrounding air, perspiring its sap and imbibing a portion of the atmosphere; an operation, analagous to the functions of the skin in the animal system.—This constant circulation of the sap is a law so irrevocably fixed upon the living tree, that even in mid winter, when not absolutely arrested by congelation, it still circulates; changes are still in progress within the trunk and branches, and the air from without is constantly effecting some alteration in the condition of the vital fluid. *Life* still manifests itself, and like every other living thing endued with this inscrutable principle by its Maker, it is incessantly occupied in the exercise of its peculiar functions.

But though the sap is constantly *descending* as well as ascending, it descends in a very much diminished quantity, owing to the escape of moisture through the leaves and branches. The *exchange* of oxygen for carbon is about equal in *quantity*, but owing to evaporation, the downward current is not only less but different in quality, is of a thicker and more viscid consistence, and the volume is rendered still less in every successive advance it makes towards the roots, as it is constantly appropriated between the inner bark and the alburnum or outward wood, for the future growth of the tree.

Notwithstanding the much more favorable condition for healing, when trees are pruned at the proper season, it is always especially when large limbs have been cut off, to apply a salve or dressing to the wound. We give for this purpose the following composition: 1-2 lb. tallow, 2 lbs. tar, and 1 oz. saltpetre thoroughly mixed while warm: or equal parts of clay and fresh cow dung with strong fresh ashes added to the mixture: or tar and brick dust.

Young trees in the nursery should always be trimmed effectually the year before transplanting, which if done after the formation of the wood, at the time above specified, is equivalent to pruning when set out in the fall or succeeding spring. When the transplanted tree has begun to thrive vigorously, the pruning should be carefully attended to every season, and the supernumerary branches cut away, leaving such only as have ample room to push themselves out to the light and sun, and allowing none to cross each other. By cutting off the limb while young a smaller wound is made, and this is almost immediately healed in the vigorous tree. An equilibrium should be kept up as nearly as possible in the top, so as to have the trunk the centre of gravity. All decayed or partially decayed limbs should be at once severed from the tree. They unfit the remainder of the tree for the full performance of its duty, as effectually as cramp or rheumatism in a limb does the human system. In plumbs and cherries, the small limbs cut off should be separated an inch or two from its junction with the main stem, and all the little spurs must be left, as these afford the buds for the embryo fruit. The apple, the pear and the peach should be trimmed close to the fork or crotch, which will afford a better opportunity for the healing of the wound. Such limbs should be removed, as come from the trunk or other limbs in a manner likely to be split or broken by high winds or a large burden of fruit. There is not so much danger of the apple in this respect as from other trees, as it is a peculiarly tough and adhesive wood. But with other fruit trees, a skilful eye will do much to prevent the lamentable sight of *breaking or splitting down.* The axe or hatchet ought never to be used unless by one skilful enough to leave a perfectly smooth surface. If a saw is used, the surface ought to be perfectly smoothed before the salve is applied, and especially around the rim. When these operations are carefully and skilfully performed, a large increase in the quantity and quality of the fruit is the invariable result.

But there are some other important matters to be attended to at this season, connected with the orchard. The bark on the trunk, when loose and rough, or *hide-bound*, ought to be scraped off with a hoe or other instrument, but never to the injury of the *live* bark. A wash of strong soap suds, with the addition of a little saltpetre, or common salt or urine, should be applied, or if this is not convenient, a good coating of lime and salt, (common whitewash.) This application has a tendency to oust insects and destroy them.

The turf over the roots immediately around the trunk should be removed, and a quantity of ashes, lime, or a little salt placed there, which at the same time that it adds to the nutriment of the tree, has a tendency to destroy insects and their eggs deposited there.

The addition of swine and poultry to an orchard during the season of vegetation is invaluable. The curculio, one of the deadliest foes to fruit, is almost annihilated by their presence, and other vermin are to a great extent destroyed by them. Slugs and caterpillars that are fastened on the trees are much diminished and sometimes entirely eradicated by the little feathered bipeds that visit the orchard; and this offers a strong inducement, where taste and humanity are wanting, to keep the little *un*feathered bipeds from disturbing them, or breaking up their nests. Such enemies as maintain their ground against all these remedies and precautions, should be removed by hand.

We may as well add here, a practice, long and successfully used in a portion of Europe, and with great effect in parts of our own country. It is to remove a narrow rim of bark immediately after the buds begin to swell in the Spring, from the limbs required to bear. This is done at a distance of 2 or 3, to 8 inches from the base of the limb, according to its size, and is speedily performed by passing a sharp knife entirely around the limb in two places, say one quarter to three eighths of an inch apart, and with the point of the knife, remove the bark entirely to the wood, but not cut into or disturb that. Mr. Thompson says in the Kentucky Farmer, that a limb thus prepared, which was less than one fourth of the tree, yielded 5 bushels of fair and well filled apples, while all the remainder of it bore but one bushel of small indifferent ones. This increase in the product of the fruit, from the above practice, is what we might certainly look for, from a knowledge of the laws of circulation before stated. The crude and undigested sap passes up through the alburnum or sap-wood, and is elaborated and prepared for use by the leaves, and then takes a downward course ready to be appropriated either to the formation of new wood, or maturing and giving weight and fulness to the fruit, as the habits of the tree may dictate. Many trees, and all occasionally, are indifferent bearers, and the elaborated sap, passing by the embryo, or newly forming fruit, proceeds downward in the process of forming additional wood, or it may be, all the way to the roots. But as the downward sap passes along between the bark and wood, by removing the bark this is arrested, and it is thus forced to enter into the fruit for which it is now every way adapted. The small space denuded of bark is soon re-covered, and a similar process may be subsequently required on the same limbs. Some conjecture a like result is partially attained, when the branch forms an acute angle with the trunk below it, as the close approximation of the bark to the wood checks the rapid transmission of sap, and in this way disposes it to the formation of fruit. However this may be, well lopped trees are generally prolific bearers. We should be careful in adopting the experiment, not to use all the limbs at once, and we may look for a feeble growth, or no growth of wood at all, as the necessary consequence of diverting its necessary aliment to the exclusive formation of fruit. R.

KENTUCKY FARMING.

We recently had the high gratification of a tour through a part of Kentucky, and as the course of cropping and some other things in this beautiful state, are quite different in many respects to the system prevailing in this latitude, and as it presents the oldest and finest example with which we are acquainted, of South-Western agriculture, we have thought it might not prove uninteresting to our readers at the North, to give them a short summary of it—leaving more particular notices of the different stocks and some other matters that fell under our observation, to be detailed as we can find room in our columns hereafter.

A portion of Kentucky has been celebrated for its fertility in sustaining large herds of buffalo, elk, deer, and other wild game, from time immemorial, by the Aborigines of the Ohio and lower Mississippi vallies; so much so indeed, that no one tribe was allowed by the others to occupy permanently here, but it was kept with a rigid jealousy as a neutral hunting ground for all the tribes of this extensive region. This also was their general battle field, where their disputes were settled by recourse to arms, thence its name among them, of the "Dark and Bloody Ground." These meetings at times must have proved very sanguinary, as whole masses of human bones are occasionally turned up by excavations, that show a destruction of savage life in years gone by truly appalling. Nor was it won from the Indians by the ancestors of the present high spirited occupants of the soil, without many a desperate and bloody struggle, and the chronicles of Kentucky, whenever they come to be fully and graphically written, will exhibit a series of events abounding in incident and peril, scarcely inferior to the wildest tales of poetry and romance.

The country is peculiarly attractive within a circle of some 40 or 50 miles average diameter around Lexington, and, considering the softness of its climate, the fertility of the soil, and the general adaptedness of the state to the production of grass, grain, and roots, and the consequent easy sustenance of all kinds of domestic animals, it may be pronounced one of the most fertile and eligible agricultural districts upon the globe. In a careful and minute analysis of this soil by the very able professor of Chemistry and Pharmacy at the Transylvania University at Lexington, Dr. Peter, it is found to be much like that of the celebrated alluvium of the Nile, and though it has not like that the advantage of annual fertilization by the overflow of waters, it possesses others scarcely inferior. The soil here will bear severe cropping for a series of years, without intermission, of corn and other exhausting products, and when slightly deteriorated, by sowing it down two or three years in rye, clover, or grass to be fed off by stock, it is apparently restored to its original fertility

That part of the state bordering upon Virginia, is broken, wild and mountainous, but when put under cultivation it is found reasonably productive, and we have no doubt some years hence, it will become celebrated for its flocks and herds. It has two months less winter than the mountains of the extreme Northern States, and possesses a superior soil, and yet so entirely has this fine region been overlooked, that land in any quantity can be had there, from 5 to 25 cts. per acre, and even within 50 miles of the Ohio river, whole sections may be purchased from 50 cts. to $1 per acre, that would make the best sheep pastures.

The Crops of Kentucky are hemp, tobacco, grass, roots and grain, and latterly, some attempts have been made to produce wine and silk, and we have no doubt, in both of these last, she may succeed as eminently as she has in the first, and make them important sources of her wealth;

for she evidently has a fine climate and soil for their production.

Hemp has now become a very important crop here; the dew-rotted, answers admirably for bale rope and cotton bagging, while Government, in its manufacture of cordage, gives a decided preference to the water-rotted article of Kentucky, over that of any foreign importation; and now that vats for clean, warm water are easily constructed to rot in any season of the year, and simple machinery is introduced for breaking and preparing it for market, there is no doubt but the South-West will not only soon drive out the foreign article, but eventually become a considerable exporter.

Wheat is pronounced a very uncertain crop here, especially on the richer soils, where it finds many enemies to contend with, such as the fly, rust, and mildew. Some think that the State is too far south for profitable wheat production, and they will have to give up the growing of it except for family purposes, to their Northern neighbors. But in this opinion we think there is an error, since very fine crops are produced in Mississippi, at 5° lower latitude, and so far from thinking of abandoning the production of so indispensable an article for bread, we hope that the intelligent minds of Kentucky will set themselves to discover the cause of these devastations, and a remedy for them, which may be possibly found in a preparatory steep of some kind for the grain just before sowing, or some properly prepared top dressing on the ground during the autumn, or early spring's growth.

When it is too thick and rank in the spring, to lessen the growth of straw, and increase the product of the grain, it is recommended to feed the whole field down a week or two with stock.

Rye succeeds well here, and is grown mostly for early spring pasture. It is usually sown in the corn fields, at the rate of two bushels to the acre, during the month of August, and if the corn stands up sufficiently straight, it is covered with the shovel plow, but such a cultivator as is used at the North, we are confident would prove a faster worker, and much more perfect instrument for this purpose. If the corn is too much lodged to plow in the rye, it will generally catch, though not so evenly and well as when it can be slightly covered. If it has received a good autumn growth, young stock and sheep may be pastured on it all winter, when the ground is frozen sufficiently to prevent poaching; and as soon as the field is dry in March, they are again turned on and kept there till the 10th to 20th April, according to the season, by which time the clover and grass pastures are sufficiently advanced to receive the stock. They are then taken off and the rye allowed to grow up, and as soon as ripened, hogs are turned on it. These continue till corn is sufficiently forward to commence the fatting process, they are now removed from the rye, and enough being left for seed, it again commences growing up for pasture, or it is plowed in as a fall dressing for the succeeding year's crop of corn.

Oats do well here; *barley*, *buckwheat* and *millet* have only been partially cultivated, but we believe always with fair and certain success. They answer as an excellent change of feed for hogs to run on the same as rye, and are also fed to horses.

Peas are scarcely ever sowed as a field crop, at which we are very much surprised. They would probably produce as well in Kentucky as in New-York, where the product in bushels is generally equal to that of corn, the labor of the cultivator much less, and we think them more nutritious for hogs. *Peas and barley* are the heaviest feed given to swine in England, and make the finishing in the fatting process. Some are now recommending the cultivation of the *English bean* for the same purpose as peas. we are only apprehensive that the summers may prove too hot and dry for it, but perhaps it will soon acclimate itself, and as it can be sown broad-cast and harrowed in and needs no after cultivation, an experiment on different soils is well worth making. The northern white *bush bean*, we are certain, would do well in Kentucky, and may even be planted among corn as is usual here, or at the South as they do the cow-pea.

Roots, with the exception of the Swedes turnep, they have been very successful in cultivating, till the last year, when clouds of grass-hoppers, blister flies, and other enemies appeared, eating off the leaves of beets and other roots, and even devouring such coarse herbage as the vines of the potatoes. It is desirable that some remedy should be discovered for the protection of the root crops. as the beets would answer well for fall feeding, and a turnep that grew *wholly beneath the ground*, we are confident, in so wild a climate, would keep all winter, and could be pulled for stock during the broken weather, and answer also for early spring food. But perhaps the Jerusalem Artichoke, upon the whole, may be considered their best root, especially for stock hogs. Turned to a field of these in the fall, they will get a good subsistence all winter, with the addition of a little corn fed to them when the ground is hard frozen, and the preparation of the ground from the rooting of the hogs is the best possible cultivation for the succeeding year's growth. We are not sure but this root is better suited to the climate of Kentucky, than any other that can be introduced from Europe or the Northern States.

The Maize, or Corn crop, however, should remain as it now is, the chief product for wintering the stock of the South-West. The gourd seed grain, with a stalk growing 10 feet high, is their best variety, and with easy cultivation on good lands, 50 to 100 bushels are produced to the acre. With a little extra attention, enormous products have lately been realized, averaging 140 to 200 bushels to the acre in large fields. As soon as the ears are well glazed, and the lower leaves of the stalks become dry, the best husbandry is to cut up the corn within a foot of the ground and shock it. By this time the stalks are sufficiently dry to escape moulding, and cut thus early, more saccharine matter is preserved in the fodder. It is more nutritious too, and easier masticated by the stock, and, according to careful experiments, this course is found to produce a larger yield of grain. During the winter the corn is husked and cribbed, and the stalks carted to some adjacent pasture field and fed to the horned stock in place of hay. A more careless manner of feeding is pursued by others, not cutting up the corn at all, but turning droves of fatting cattle into large fields, to be followed by hogs to eat up what passes whole through the cattle, or is thrown down and trampled upon the ground. If rye has not been sown among the corn for spring pasture, and if the field is not destined for corn again the succeeding year, as soon as it is cut up and shocked in September, it is sowed to wheat, and where the corn shocks stood during winter, is sowed in the spring to oats. This last system, however, is so wasteful that it is now nearly abandoned by all good farmers, and some even instead of feeding their corn whole to the hogs in the ear, have mills for grinding it, cob and all, and then mix it up with water and let it ferment before feeding. Where the proper conveniences exist, we have no doubt, the extra labor in doing this is more than compensated by the saving of grain, even at its present low price.

Blue Grass.—The great boast of Kentucky is her blue grass pastures, and of these, she certainly has great cause to be proud. It is grass that admirably suits the climate, and this fertile, calcareous soil, clothing it with the richest and most nutritious feed, and when left from the month of August to grow through the autumn, it attains sufficient height before cold weather sets in to protect itself, and thus grows on all winter, affording the stock turned upon it, except when covered, as it will be occasionally for a few days, with snow, all the food they may want to keep them in good heart till spring.

Parks.—As the country was cleared up, the settlers had the good taste to leave what they here call woodland pastures, that are made by merely underbrushing among the original forest trees, and sowing the ground to grass. These lend a sort of grandeur and relief to the landscape, giving it great beauty and variety, and equal in appearance, to the noblest parks of England. They protect the cattle from the cold blasts of winter, afford them a grateful shade in the summer, and preserve the grass green and growing during the hot season, causing the pastures to produce more than grows in the open fields that are left entirely open. Groves also of the Locust are allowed to grow up for the same purpose, and to furnish timber for building and fencing stuff.

Stock.—Horses, Mules and Cattle. We doubt whether there is a district of the same size that can make a superior show of fine stock than is now to be found in the circle about Lexington. Here there are blood horses of the largest and finest description, animals of great fleetness, power, substance, and endurance. Asses that are surprisingly large, 15 to 16 hands high, and the stock of mules from these great animals, are of prodigious power. We have seen them occasionally 17 hands high, and taking their end of the yoke quite satisfactorily, harnessed in, cheek by jowl, by the side of a great cart horse. The Short Horns are numerous and very highly and finely bred, and have added great wealth to the state. They find with this superior race of cattle and its crosses, that they can bring a beast to market of as great weight at four years old, as they formerly were obliged to wait 7 or 8 years for, which is certainly no inconsiderable saving of time, and adds largely to the profit of beef raising. We should be glad now as Kentucky possesses some of the best milking families of the short horned tribe, to see her pay a little more attention to the dairy, for she certainly might greatly excel in this line, and produce butter and cheese as cheap as can be done at the North. High crosses of the short horns upon the native stock, have turned out some great milkers. We have been informed that one cow on the best of clover and blue-grass pasture, without other food, averaged 41 quarts of milk per day, for three weeks, and others in winter on hay and corn fodder, gave from 20 to 26 quarts for three months in succession.

Sheep.—Kentucky can also boast some fine flocks of Sheep, and the growing of Wool now is considered quite profitable, and the only objection to increasing their flocks, is the liability of their being killed by dogs. We believe that the apprehension from dogs, has been one of the greatest hinderances to the spread of sheep husbandry throughout the West, thereby incurring a loss to this fine section of country, of millions annually. If all other guards failed of protecting sheep, we would recommend sending to Spain for some Alpine mastiffs, such as are used there to guard the flocks against wolves. Three of these large animals would be sufficient to protect a thousand sheep, and woe to the dog, however powerful he might be, that came near them. A.

AGRICULTURAL SCHOOLS

Should at once be established throughout every State in the Union. We know of no appropriation that can be made by our Legislatures, that would render greater benefit to the country at large. And by *schools* we would mean to be understood in the most comprehensive sense of that term. These should be large and commodious buildings, either erected by the State or permanently hired, at convenient points, where not only Natural Philosophy and Mechanics, Chemistry and Geology should be taught, with their application to buildings, implements, manures, and vegetables; but where also, all varieties of soils, and the best farming tools of every kind should be collected, their principles thoroughly explained to the students, and practical lessons taught to every inmate. What an army of *agricultural reformers* we should soon have scattered over the land! What a tumbling there would be of the rickety implements and no less rickety systems, or rather want of all systems, in many that call themselves farmers now-a-days!

Let not our sober minded readers apprehend that we are running wild on this subject, or conceive there is any patent way of producing crops or raising cattle without toil and attention. But what we claim is, that by using a plough made on a right principle, we can do twice as much work in a day, as with another made on no principle. That by using certain kinds of manures on certain kinds of soils, twice as great crops may be obtained as by their misapplication, from an ignorance of chemical and geological science. That by the adaptation of proper seeds and a proper mode of cultivation, twice as much may be procured from the land when prepared for a crop, as by cultivating improper seeds; and finally, by feeding the crops to the right kind of animals, twice as much meat may be made, as from being fed to Pharoah's lean kine. If we multiply all these two's together, we have *eight;* and this ratio, of *eight to one,* is just about the difference we see in the progress towards wealth made by the skilful and ignorant farmer.

Will our Legislators do something for the community, themselves, and posterity, in this important matter?

Donations to Agricultural Schools, *and other benevolent objects.*—We have noticed with the sincerest pleasure, a bequest recently made by the late Benjamin Bussey, Esq. of Boston, of nearly $200,000, his late valuable residence in Roxbury, for the purpose of founding an agricultural school, and imparting information on agricultural subjects generally.

Here, then, we have the first practical, efficient movement towards establishing an agricultural school in the United States. It has been left to a private individual to take the first step in this important work, that should have been taken by our State Legislatures years ago. But in the absence of public munificence for this object, which from all appearances, is likely to continue, it becomes a matter of *private charity,* and as such, is as equally deserving private regard, as most of the charities of the present day. When shall we have an opportunity of recording a similar appropriation from some of our New-York millionaires?

We must here be allowed a remark, not for the purpose of indulging in invidious or disparaging comparison towards others, but for the sole purpose of rendering justice where it is due. We have often regarded with admiration, the continued and large donations and bequests of citizens of the old Bay state, the ever glorious Commonwealth of Massachusetts, for the promotion of science, and literature, and religion; and all the varied objects of charity, and the alleviation of the thousand ills that flesh is heir to. This is not the place to specify them, nor should we have room if inclined to, for their name is Legion; but we should be gratified to see a list of these, with names, dates, objects, and amounts; which, if furnished in detail, would exhibit the noblest array of philanthropy and munificence, the world has ever shown. We remember to have seen some years since, a statement made *ex cathedra,* that the total of appropriations for the above objects made by citizens of Boston alone, exceeded $1,000,000 annually.

Individuals who make these appropriations, are generally speaking, the best fitted to superintend and carry out the *general plan* of their benefactions; and to illustrate our meaning let us cite two or three examples. The late Stephen Girard, of Philadelphia left *millions* to endow an Orphan Asylum, for the support and education of the friendless and destitute. From the moment of his death, which occurred six or seven years since, more than $2000 a week or $100,000 a year, in actual cash, was accruing on this fund, yet up to the present moment, what has been the result? The amount of income rigidly and economically applied to the object, would have given ample support to *one thousand* individuals from the moment of his decease for all time to come. Will any of our Philadelphia friends tell us how many, up to the present time, have received the benefit of this more than princely endowment? Our impression is, that few, *if any,* have thus far, of the *poor and destitute,* been the recipients of this bounty. We know that a board of a *building committee* was *promptly organized,* which, with directors and other managers, have consumed some $20,000 to $30,000 a year for the mere *headwork for the construction of the Orphan's House!* How much of this vast expenditure would have been saved to these little sufferers, had Girard himself, with all his practical good sense and efficient action, directed this object! He failed to perceive, that in his mode of giving, he endowed the *scheming and the affluent, perhaps, more liberally than the friendless and destitute.*

In connexion with this example, let us mention two others, the first of which is in strong contrast with the one just cited. Some years since, a lady, single handed and alone, and without any pecuniary means of her own to assist her philanthropy and strong practical good sense, procured subscriptions from benevolent individuals, to erect a plain, but substantial brick building, about 80 feet long, 50 feet wide, and six stories high, in South Hadley, Mass., the object of which was to furnish instruction to young ladies of moderate circumstances, who wished to become fitted for teachers. The total expenses of their education consisted in the *first cost* of the provisions, which they cooked themselves; fuel, their necessary books, and a trifling sum for tuition in the higher studies; all the lower branches being alternately taught by the more advanced; the total sum required per week, but little exceeding one dollar each. When passing there last season we noticed with astonishment the enlargement of the building, by the addition to one end, and two large wings, increasing it to more than double its original capacity, every part of which is occupied by the scholars. Here then, we have a great practical benefit, the furnishing annually, perhaps 50 or 60 teachers, every way suited, by their peculiar training in habits and acquirements, to disseminate in the cheapest manner, the blessings of education throughout the land. Will the millions of Mr. Girard effect more for the community when all the plans of his administrators have come to their fullest maturity, than has been already accomplished by this almost unaided individual?

One other instance, and we have done. The illustrious Fellenburgh, on coming into possession of a handsome, though by no means extravagant patrimony, determined at once to begin the application of it to practical purposes, without waiting its accumulation through a long life of, it might be, doubtful success. With this view, he immediately established his agricultural and othēr schools at Hoffwyl in Switzerland, and became himself the teacher and superintendant of the pupils, and placed *his daughter* at the head of the female department; and through a long series of years has he, from his own resources, conducted this establishment, rendering more benefit to his country and the world, than any other institution, endowed by successive generations of his countrymen, had in the same time effected.

The moral we wish to educe is obvious. Those benevolent individuals of our own state and country, who intend to bequeath large sums for the benefit of the community, (?) will secure the object of their intended benevolence most effectually, by at once applying their funds to this object, instead of incurring the hazard of their accumulation or safety, in this age of Bank explosions, and Trust delinquencies, or chancery and executory application; and enjoy while living, the luxury of witnessing the effect of their self-directed bounty. R.

Tour in England. No. 3.

HISTORY OF THE BERKSHIRES.—Arrived now in the heart of old Berkshire, the public will probably expect to see some account of the early history, the breeding, rearing, and treating of the celebrated animals to which this county has given a name. We very much regret, that we had not more time than was at our command, while in England, to fully elucidate this subject, as well as many others of great interest to the agricultural community, but hope at some future time we may be able to accomplish this satisfactorily. But what few facts we at present have at command, are probably about all that the generality of readers will care to know. We shall therefore proceed to state them as succinctly as possible, and trust that they will be considered sufficient without obliging us to again refer to the subject.

We traversed this and the neighboring shires of Hants, Wilts, Oxon, Bucks, and Surry, in those directions where it was thought important to do so, and were generally attended by stock purchasers in our rambles, who were perfectly conversant with the whole breeding of this region, and we think that we were as thorough and indefatigable in the search after Berkshires, of the best breeding and quality, as the circumstances of the case would permit, or perhaps was of any particular benefit to the public or ourselves.

All who pretended to any positive knowledge of the subject with whom we conversed, agreed that this breed of swine originally was a large and rather coarse animal, of a white or buff color, intermixed with black spots, and that they were improved to their present great perfection of form and dark color, by the Siamese or China boar. One quite intelligent respectable old gentleman, of a handsome estate, residing at Southbridge, twelve miles from Reading, with whom we conversed, distinctly recollected about fifty years ago, when small prick eared black boars were brought into his neighborhood to refine their large hogs; but Mr. Westbrook of Bysham informed us, that his father possessed them in great perfection sixty years since, of a dark rich plumb color, mingled with a little white. He (the son) however, had suffered the stock left him to breed in and deteriorate so much, that we thought it not worth purchasing from; but another person, who had of it some years ago, and who had paid good attention to it, allowed us to choose two of his finest sow pigs of this family and color, perfect almost in form, and of a good large size.

From Bysham they probably gradually found their way along up the Thames, and to different parts of the county and its neighborhood. At Reading they told us that they had known them only for about forty years. When we wrote our "Chapter on Swine," that appeared in the Cultivator some two years since, it was on the authority of different friends who had resided in the south and west of Berkshire, Professor Low and some others, that we asserted that the improvement began about the year 1800, but it seems that our informants only knew of it in their quarter at that period, and that it is now distinctly traced by Mr. Westbrook as far back as 1780. We are rejoiced at this, and hope it will be possible to go still farther hereafter, as it will only make the breed the more valuable in our estimation, as showing that it has a long established character in general excellence and pedigree, unknown to any thing of the domestic kind, the Asiatic hog alone excepted.

The Berkshire is now generally acknowledged to possess more good points in him than any other breed whatever, as he is of the largest *profitable* size, of the truest and best shape, and has the most symmetrical limbs, and superadded to these, joins what is rather remarkable, fine thin hair and soft skin, to great hardiness and constitution. They are prolific breeders, the best of nurses, of thrifty growth, early maturity, easily kept on grass, the coarsest roots, or bran and brewers grain, and *will fatten at any age.* Their dispositions also are very quiet, unless roused to a fight, and then like all well bred animals, are game to the back bone.

Their powers of endurance are very great, and nothing in England can travel with them of the hog kind, as has been often proved in driving the different stocks to fairs and markets, side by side. We took great pains to obtain evidence on this important point to the western farmer while abroad. Joined to all the above good qualities, their meat is of the best kind, the hams, shoulders, and jowls, being lean, muscular and delicate, while the side pork is very fat, and cuts clear of lean as the Chinese, thus making the heaviest mess pork for barreling, and such as is most preferred at the eastern markets. We saw hundreds of bacon sides in England, and since our return to America, have frequently witnessed the cutting up of Berkshires where the fact of their making clear pork was disputed at the packing houses of Cincinnati and other parts of Ohio. Again, notwithstanding their dark color, whether their hair be singed off by burning as is usually practiced in Great Britain, or scalded as in the United States, the skin dresses of the purest and most delicate white, and nothing in the slightest degree dark can be detected at all in it but the roots of the hair, to which the most fastidious stickler for white in a pig's skin cannot object.

We found the Berkshires more sought after in England than any other kind of swine; they were not only taking them into Scotland and Ireland, but France, Germany, and other parts of Europe, and the British colonies in every direction, not even excepting Australia, some 8,000 miles distant from the father land.

They are freer from disease than any animal we know of, and are never cursed with that sickening scabbiness of the skin, that characterizes so many other breeds.

In breeding, those of medium sizes and fine points are most sought after in England. Ten to fifteen score (200 to 300 lbs.) are the maximum weights desired in Berkshire, and we were often told there, that they considered these the best and most profitable sizes for them. From this opinion, many breeders in our country dissent entirely, and though we would generally recommend those of a medium size to be wintered over, still if a spring pig will fatten kindly as he is growing, and can be made to attain 250 to 300 lbs. by the following December, it saves wintering, and may be considered upon the whole the most profitable breed. It is contended that the largest and finest Berkshires will easily do this, and several breeders have now commenced a series of experiments with the produce of our late importation, for the purpose of testing whether it can be done, and we are promised a full report of the trials as soon as completed.

All colors exist in Berkshire, stragglers occasionally finding their way in there, but they are not recognized as their breed at all, the *true sort* being of a black, or deep rich plumb color, with a slight flicking of buff or white on them, the feet generally white, with a small white strip in the face, and frequently a white tuft at the end of the tail. White hogs exist in considerable numbers in the neighborhood of Windsor, of tolerable fair quality. They are called old King George's breed, and are said to be the descendants of some Leicesters given the late George III. by the celebrated Bakewell, for the purpose of stocking his Majesty's farm near by. They are now much deteriorated in breeding, and totally unworthy, in our judgment, an importation.

Great care is requisite in purchasing Berkshire hogs, especially on the borders of the county, as the Neapolitan, Hampshire, Wiltshire, and various other crosses exist, that none but the best judges in breeding can detect, and many of the farmers are exceedingly careless in their selections and stock animals, and some are totally indifferent whether they are pure blood or not. As to their cost, this is according to fancy in a measure. Those who had taken particular pains in their selections and breeding, for picked stock asked high prices. All sorts of meats are at present scarce, and very high in England. Good pork was worth 12 to 14 cts. per pound when we were there, and the poorest pig of any breed, two to three months old, would bring in market as a stock animal, $4 to $8 each. Two years ago, they were not worth half that. But the first cost is nothing in comparison with other expenses, which are almost innumerable; we will merely state one item. By the London packet ship Mediator, we shipped two grown animals and eighteen small ones, about three months old. Mr. Whyte's bill of feed alone for these was 34*l.* 1. 6, which at the then rate of exchange, amounted to over $160. To be sure, we were liberal in laying in sixty days supplies for the stock, as we had no idea of paying a high price for animals, and then have them starved to death on the voyage. As near as we could estimate the cost of four months' pigs, including accidents and deaths, laid down in this city, it amounted to about $50 per head, without reckoning any thing of our time employed in the selections, so that the reader will see that there can be no very great profit in importing Berkshires, at the prices we sold them at. Indeed, we had no idea of making money on them from the beginning, our sole motive in the importation was, to secure *superior fresh* crosses—whether we succeeded or not in doing so, as the animals are now here, the public can judge for itself; further than this, it does not become us to speak. Certain it is, however, that we took unwearied pains in the selections, and went down to Berkshire no less than four times to do so. We chose from all the largest and finest families that we could hear of, and if the animal suited us, we never hesitated at the price named for it. Others may import at a less cost than we have, but if they have obtained larger and finer animals, we shall be happy to be advised of the fact. We hardly think that England can at present add further improvement to our stock of swine in this country, and if any more importations are wanted, we would recommend obtaining them from China, Siam, and the Asiatic Islands.

We trust we shall be pardoned so many words on a subject in which it is well known that we have had a pecuniary interest, for we assure our readers that we have been literally compelled to do so, in consequence of the almost innumerable questions and letters that have been addressed us upon it. We fully believe what we assert, and, as we have paid particular attention to this subject, we express ourselves frankly, strongly, and fully, and exactly as we think. To all those who do not agree with us in opinion, we cordially invite from them an expression of their sentiments, and more especially a statement of facts in favor of any other breeds of swine, and they may be assured that they shall have a full hearing in our columns. We go for the great *general* good and improvement of agriculture, without regard to the private interests of any one man or thing.

A.

PEDIGREES.—It is found troublesome and perplexing, in reading the pedigrees of animals, to ascertain how many crosses they had of certain stock, without continually counting the g's which stand for great, great, grand dam, and so on. Now, instead of this perplexing repetition of g's, which it is impossible to repeat in speaking, and convey any definite idea, we recommend placing figures for them, thus, suppose that we wished to give the pedigree of the cow Minerva, by this method we should say:—

Minerva, calved May 6th, 1837, by Jupiter, (244), dam Ora, by Saturn (230), d. 2 Latona, by Orcus (221), d. 3 Juventa, by Ajax (215), d. 4 Lais, by Memnon (210), d. 5 Fulvia, by Pan (199), d. 6 Siren, by Pluto (168), d. 7 Styx, by Charon (143).

Present method in the Herd Book:—

Minerva, calved May 6th, 1838, by Jupiter (244), dam Ora, by Saturn (230), g. d Latona, by Orcus (221), g. g. d. Juventa, by Ajax (215), g. g. g. d. Lais, by Memnon (210), g. g. g. g. d. Fulvia, by Pan (199), g. g. g. g. g. d. Siren, by Pluto (68), g. g. g. g. g. g. d. Styx, by Charon (443).

In reading the proposed method, we should say, Minerva, calved May 6th, 1837, by Jupiter (244), dam Ora, by Saturn (230), dam second, Latona, by Orcus (221), dam third, Juventa, by Ajax (215) dam fourth, Lais, by Memnon (210), and so on.

This strikes us as much more simple and definite than the old way, and we hope that the committee of gentlemen, appointed to superintend getting up the American Herd Book, will take the subject into consideration, and in the meanwhile, all those who approve the suggestion, can adopt it hereafter in stating the pedigrees of their animals.

A.

THE FARMER'S REGISTER.—Edmund Ruffin, Esq. for ten years the sole editor of this able agricultural paper, announces his intention to abandon its publication at the expiration of the present volume. The causes assigned are two—1st. The hostility of the Banking interest in the state, whose wrath has been kindled by his uncompromising exposition of their mal-practices, the propriety of which may be learned from the simple statements, given in the April No. It is there charged, that there is an existing partnership of Banks and State, in this wholesale fraud, and that Bank directors and members of the Legislature are largely indebted to the Banks. Proof—Fifty-five members of the last legislature of Virginia, owed the Banks $111,675, and the Bank directors, *so far as reported*, are indebted either as principals or sureties to the Banks, to the moderate amount of $2,321,080, or about one-fourth of the whole Banking capital of the State. In two Banks, the boards of directors owe nearly one-half the amount of capital, and in another, which might teach a lesson of *thrift* to some of our New-York or Michigan bankers, who have proved themselves anything but *green* in these operations, the directors absolutely *owe the Bank, over one-third more than its entire capital!* And, to show the pecuniary interest these worthy individuals have in the prosperity of the institutions under their special charge, of twenty-one directors constituting the boards of three Banks, four have little more than stock enough to entitle them to hold office, while the remaining seventeen have not a spare share a piece, over the five necessary to their holding their posts.

But the great point that is made against them is, that while the Banks are demanding, and the legislature have acceded to suspension, for the purpose of enabling them to place themselves in a position to resume, they have during the past year, from January 1, 1841, to January 1, 1842, increased their liabilities and decreased their specie to the amount in the aggregate, of over $1,000,000! and this is the result of a five years' suspension!

We are not *bullionists*, and far from being of that school that would attempt to interdict the circulation of Bank paper, believing that Bank paper convertible into specie, is the best currency in existence, or that has ever had existence. Neither do we believe that

Banks may not in some great contingency, such as occurred in the spring of 1837, require a breathing time to look around them and prepare for a new and difficult condition of things; but, as with the Northern Banks, a few months are sufficient to enable them to prepare to meet their engagements, and at the expiration of this time, they should be *compelled* to meet them or go into liquidation. The last five years are rich in lessons of wisdom on this head, and how infinitely better to the community and themselves have been the effects of resumption by the Banks of the North, instead of continued suspension as in the South and West. But we are exceeding our limits on this subject. It is for this great crime, of exposing the chicanery and tricks of the Banks, this faithful watchman of the *Farmers'* interests, is to be sacrificed.

But 2d. He says: "The great and unceasing and all-important obstacle to the proper maintenance, and consequent full measure of utility of the Farmers' Register, is the general apathy and want of all public spirit, and *even of enlightened self-interest*, by the agricultural community of this state. The proportion of the agricultural class of Virginia is amazingly small, who participate in the generous feelings expressed by one who merely feels and thinks as every member of that class should do, and would do, if true to their own and their country's best interests. The pecuniary support afforded to this publication has never been enough to compensate the editor for the risks and losses necessarily incurred; and for the last few years, there has not been enough of clear profit to pay for a capable clerk. Nearly half the actual support of subscribers is furnished from beyond the borders of Virginia—and the arrears of subscription now due, and of which the payment is desperate, amount to more than all the clear profit ever derived from the adventure. Under such circumstances, the work has been continued less in regard to any hope of its being properly sustained, than for other considerations. But with the close of this volume will end the editor's labors for ten of the best years of his life; and he will no longer obtrude, on the agricultural public, services which seem to be so little appreciated, and which have been so little aided by the sympathy of the great body of the members of the interest designed to be served."

Here is a lesson that may well make the farmers' advocate hang his head with shame. The shades of Washington and Henry, of Marshall and Madison, will frown indignantly on the degenerate cultivators of their once proud Commonwealth. But Virginia is not alone in her want of enlightened and patriotic efforts to improve her soil, and sustain progressive advancement in agriculture, as the unrequited efforts of many of its best friends have abundantly proved throughout the whole Union. Yet we hope and trust, we are not *hoping against hope*, that a brighter day is dawning, and that farmers will ere long know and appreciate their *true* friends, and will reward those who have done, as well as those who may be "doing them a more essential service than the whole race of politicians put together."

PROTECTION OF HOME INDUSTRY.—Our object in alluding to this subject, in the last and present number of this purely *agricultural journal*, is simply to disabuse the farming community of the false hopes they may still entertain, of supplying Europe with our agricultural productions. We have shown that there is less of beef and pork exported from this country now than fifty years ago, and that even the small amount of grain and flour we continue to send to Europe, proves a serious loss to those engaged in it. We now propose briefly to show from the temper of the English sentiment on this subject, and the general condition of the laboring portion of Europe, that any future *essential* change of policy in our favor is hopeless. In exhibiting English public opinion, we shall quote from the London Farmer's Magazine, an ably conducted periodical, and the most popular mouth-piece of the farming interest, which *is the controlling interest in England, as it should be here, and will inevitably be, whenever it takes the trouble to make its voice heard.*

In the January number, in speaking of this country, it says, "To employ a portion of their surplus population in cultivating the banks of the Ohio, is an object of immense consequence to their future prosperity; but this advantage cannot be obtained, unless the inhabitants of the British empire consent to abandon the tillage of many millions of acres at home, and draw their supplies of food from foreign nations. We see not the improvement of our present condition, by working in mines and exposing ourselves to furnace labor, in exchange for American flour and Ohio salted beef. The value of agricultural produce in British America (Canada) is very considerably interfered with by clandestine importations from the United States." This trade it is strongly recommended to cut up by the roots, but the British shipping interest in this instance, happen to have the longest end of the lever, and the National government leave this thing to them for the present, to the small detriment of the farming interest at home, and the great annoyance of the colony. But colonies, with our politic old mother, to our own cost we know, are loved and cherished for the amount of money they can earn for her, not the trouble of defence and protection they require. They have however added largely to the duty on flour now passing into Canada from this country, and as soon as it is any object to raise the duty on wheat it will at once be done.

From the February number of the same journal, we quote, "The American citizens now desire John Bull to brave all the dangerous consequences of the scurvy, and to eat American salted beef for the benefit of American agriculture, instead of English fresh roasted beef. They ask Englishmen to work in mines and fry before furnaces; and in exchange for this duty, the free traders promise free born Britons, American flour and American salted provisions But it is not possible to impress on our population the propriety of throwing several millions of our lands at home out of cultivation, and reducing their own countrymen to poverty and wretchedness, for the sole benefit of American agriculture and American field labor."

The March number of the same journal says, "The agricultural interest in America will probably require in exchange for their produce, *bullion*, with which they may extend American agricultural improvements." (We should be glad of paying our debts there, and the trifling amount of manufactures we are constantly importing from them, but are denied this poor privilege, with almost every article we export from the north. They take cotton, which they cannot do without, and rice *uncleaned*, and a few other articles from the south; and a small quantity of potash from the north.) "Surely her Majesty's subjects are not so perfectly demented, as to prefer the countless plains on the banks of the Ohio to the cultivation of British and Irish fields, nor can they be so far gone in self-respect, as to work in factories, in mines, and to destroy their constitutions before furnaces, for the supply of foreign nations with the different articles of their labor; and the pay for these toils to be their food, so long as health permits them to do their work in a satisfactory manner to their task-masters, (the Americans,) and not one day longer." The number of April gives the opinion of the seconder of the corn law modification. He says, "*Sir Robert Peele's corn law would effectually prevent any greater quantity* (*of corn*) *coming to us from America and Odessa, than the present law allowed.*" For themselves they say, "American flour should, *in a most particular manner*, be excluded from our markets; its importation will materially interfere with our milling trade, and a great proportion of the quantity latterly imported from America is not genuine, being mixed with Indian corn meal, and its deleterious qualities cannot readily be detected." (We doubt if a pound of Indian meal has been mixed with every 1,000 barrels of wheat flour exported; and when sent abroad, our corn meal is esteemed a choice delicacy, wherever it goes. We have heard a resident at St. Croix the past winter, speak with enthusiasm of the delicious article he was regaled with from the Wilmington mills. But to misstate the case, and depreciate the American article, is an English way of stating an argument and securing a case.) "We cannot conceive that any British advantage can arise from this system of generosity, nor can we comprehend how that doctrine can benefit us, which for the sake of increasing agricultural cultivation in the wilds of America, would place millions of acres of land at home out of tillage."

We could multiply these extracts ad infinitum, but we think they are sufficiently explicit, to show the present temper and feeling of British public opinion towards the policy of admitting American agricultural products into that kingdom. We will now state briefly the condition of the *laboring people* in Europe, from which American farmers can judge of the prospect they have of being able to compete with them in the English grain market, whenever the short crops compel them to admit it.

In Denmark, the peasantry, who are the only laboring classes, are held in bondage, and are bought and sold with the land.

In Russia, it is still harder for the serf, for the emperor and nobles own all the land in the empire, and the peasantry are transferred with the estate. They universally live in wretched cabins, sleep on the bare floor, and in the beginning of winter, have a tolerable supply of cabbage and coarse bread, scarcely ever meat or butter; but towards spring, especially if it be a hard winter, or they have had a scanty supply, or have been at all improvident, they are obliged to eke out their coarse meal by the addition of bark, and even *straw* reduced to a fine state. This *brutish fodder* produces intestinal diseases, that prove fatal to thousands on the return of warm weather.

In Poland, the peasantry are all slaves. A writer who has travelled there in nearly every direction, says, "We never saw a wheat loaf to the east of the Rhine in any part of Germany, Poland and Denmark," and he might add Russia. And let it be borne in mind, these are the countries that produce the wheat which is stored up at Dantzic and other convenient points to pour into English ports whenever they are open at all. The food of the above competitors of *American freemen* is "cabbage, potatoes, and sometimes black bread and gruel without the addition of butter or meat."

In Austria, the nobles are the proprietors of the land, and the peasants work like our slaves, every day throughout the week for their masters, except Sunday.

In Hungary, it is still worse, for the peasantry (the slaves) do all the work, pay all the taxes, and have soldiers quartered on them at pleasure.

In France, eight millions never eat wheat bread. Their food is barley, rye, buckwheat, *chestnuts*, and a few potatoes. The average wages in France is $37 50 for a man, and half this for a female for the year, and one-fifth of this amount is taken from them by taxes.

In Ireland, the average wages are 9 to 11 cents a day; and last of all, in England and Scotland, among a large class, they receive but just enough to keep soul and body together, and for the last year, if their own pitiable accounts are to be taken for truth, thousands have died from hunger and disease, consequent on their privations.

Such then, farmers of the United States, is the class of people you are to come in competition with, whenever you send your productions abroad for a market. But this is not all. You have two other items to contend with. The first is, transportation to their shores, from an average distance of 1,000 miles from the interior of your own country, and then across the Atlantic 3,500 to 5,000 miles further. But this difficulty and expense, the indomitable energy and resources of our countrymen could grapple with—but a greater one yet remains behind, and in this we must inevitably be worsted. European exactions are an over-match for even Yankee skill and perseverance, though the latter is unequalled by any thing else. We have then the enormous customs or duties to pay in foreign ports, and to give you a slight idea of what they are, and nearly what they *always will be*, we subjoin the impost on some of the principal items of export, to the principal countries with which we trade in Europe.

Cotton being an article they have not hitherto raised, it is admitted at a small duty by all Europe; generally at less than one cent a pound, and in some cases, as in Prussia, it is free; but as by manufacturing, they can make three times as much as we in producing it, there is little credit due their liberality on that score.

The following table shows the duties levied on the articles enumerated. The *sliding scale* being adopted both in England and France, to regulate the duty on Grain imported into those countries, the rate of duty may vary every month, increasing as the price of grain or flour falls, and vice versa. No later authentic information of the rates actually paid, have been received than the close of the year 1840, but those of 1841 will not vary materially from those of the preceding year.

ENGLAND.

Flour, per barrel, paid duty in 1840,	$3	12¾
Wheat, per quarter of 8 bushels, do.	5	20
Corn, do. (not given in 1840) in 1838,	3	68
Rice, per cwt. in 1840,	3	60
Tobacco (manufactured), per lb. in 1840,	2	16
do. (unmanufactured), do. do.		72

RUSSIA.

Flour, per bushel, in 1838,		56
Rice, per 36 lbs. in 1842,		45
Tobacco (manufact'd), pr 36 lbs. in 1842,	9	00
do. (unmanufact'd), do. do.	4	50

FRANCE.

Flour (wheat), per 220 lbs.	in 1840,	10	83
do. (rye), do.	do.	6	60
Wheat, per 22 gals.	do.	4	63
Corn or Maize, per 22 gals.	do	3	50
Rice, per 220 lbs.	do.	46	75
Tobacco, per 2¼ lbs.	do. nearly	2	00

Austria levies a duty of $7 20 on every 123½ lbs. leaf tobacco imported; and Prussia $7 51 on every cwt. of manufactured tobacco, and $3 76 on every cwt. of unmanufactured tobacco. The two last never import grain from the United States.

We have given above the figures; we shall leave it for our readers to determine, how desirable a trade must be to us, carried on at a distance of five thousand miles, and paying an average duty *a good deal exceeding one hundred per cent.* And this, be it remembered, is after carrying into the account 700,000,000 pounds cotton, exported last year, and paying but a trifling duty abroad; throwing of course, nearly the whole burden of duty on the other exports, the product of the country at large.

In round numbers, we pay on our exports, amounting to about $90,000,000 annually, *over one hundred per cent. of foreign duty*, while the $100,000,000 we import, we levy a duty only of twenty per cent. The *reciprocity* in this intercourse seems to be all on *one side;* yet one sided as it is, it exhibits about the fairness of trade we have ever had in Europe. Nor need we look for any material abatement of foreign imports. The selfish policy they adopt, we must use in self-defence, or be kept in our present slavishly embarrassed condition. No change of policy need be looked for abroad, till the present race of human beings are blotted out of existence, and another substituted in their place, with an intensity of love for their neighbors, as great as that now existing for themselves.

Then why do we indulge this insane policy? The motives are various. We have never been '*frightened* from our propriety,' though we have often been *gulled* out of it; and our late special treaty with France, by which her politic monarch, apparently crouching before our menace, yielded to our demand for the payment of a few millions, but first secured conditions by which she received it back ten times over. He 'stooped to conquer.' It was an act illustrative of the race. 'Twas the old bargain over again on a larger scale, in which the countryman sold his turkey for a dollar and his dinner, but his dinner consumed the turkey and as much more with it. We received an indemnity of about $5,000,000, and have paid them back $50,000,000, for which we have no claim for indemnity.

But our great error is in submitting to a policy dictated by a small minority of our producing class, in their misguided expectations of promoting their own exports and profits, in the exact ratio they injure, (from excessive importation,) all the remainder of the Union. Do they not see the utter fallacy of this doctrine—that Europe buys not a pound more of cotton for all our imports than she would without, and that in the face of all concessions, she is stimulating the production of cotton in Africa, in Asia, and the Islands of the Indian Ocean, and that they are hasting in their career as competitors beyond any thing heretofore known? The South is sleeping on a volcano; and before she would acknowledge it to herself, if allowed to pursue her own policy, Europe would be supplied with cotton at cheaper rates elsewhere, and her market at home would be ruined by the utter bankruptcy of our own manufactures. How vastly better for her to be warned in time. Let her raise less cotton, and more grain and other products. The profit would be greater and the risk less. By sending a smaller quantity abroad, prices would be higher. We believe if her annual crop were one-fourth less, the cotton grower would receive more in the aggregate for his crop than now. By stimulating production, he is his own most formidable competitor. In the mean time, our own manufacturers have been advancing, and by a judicious protection will continue to advance beyond anything the world has ever seen, and will in time afford an unlimited market for the raw material. We consume now as much as our total production twenty years ago, and an amount equal to that manufactured by Great Britain at that time. We are now only twenty years behind the greatest manufacturing nation in the world! What a destiny remains for the United States if we have wisdom to acheive it!

Circumstances at no one period of our history, have been so favorable to our growth, if properly used, as at the present moment. Owing to the distress abroad, every vessel now coming from Europe is crowded with intelligent and industrious emigrants.* Call into use the dormant capital that is now hoarded up from apprehension of its total loss; call into active operation the millions of manufacturing investments now idle and unproductive, by a sufficient and permanent *protection*, and we fix all this emigration immovably to our soil; and as much more behind, as the persuasion of those with us, and the example of their own success, will induce to follow. Though we cannot afford to carry bread to Europe to feed her industrious citizens, we offer them every facility to come here and bake it for themselves; and if we are unwilling to go there to purchase the fabrics of her artizans, we solicit their aid in making them on our own soil.

We have seen there is no reciprocity in our intercourse with Europe. Let us give up then this phantom of *free trade*, a thing British statesmen are fond of pensioning their distinguished writers to promulgate to the world, as eminently worthy their imitation, but which they are most especially careful to eschew themselves. 'Tis a dream unworthy our waking hours. Let us cherish the operations of our own HOME INDUSTRY already commenced, and aid in developing new resources of employment and wealth. We have enough of every variety of original materials, to supply ourselves. To make use of the means already in our possession, is the most obvious, as well as the most politic course we can pursue. We have a continent to operate in—a land of surpassing fertility, stretching through 22° of latitude, and 40° of longitude, and embracing every variety of soil, climate, and production. This is almost every where well watered, and furnishing abundantly a natural manufacturing power, far beyond any other portion of the globe. And where this is wanting, exhaustless mines of coal offer their gratuitous treasures for our use. Can we be so insane as to forego all these manifest advantages at our hands, and seek those entangling alliances from the old world, the father of his country so justly deprecated? Free trade is a chimera of the brain, 'tis impossible in practice, and if possible would still result in the loss of the exchange. The sovereigns of Europe *talk* of Free trade, but they *act* monopoly. They *will have* the Lion's share. They offer us no other terms. We have been hewers of wood and drawers of water, till our patience is exhausted. We have only to resolve we will be so no longer, and our emancipation is already completed. *The people —the people* have only to tell their vicegerents at Washington that their minds are deliberately but unalterably made up in favor of *protection*, and they will afford it. 'Tis the only tribunal we can approach for this object. The states have voluntarily yielded up this right. It exists with Congress, or it exists nowhere. Let us then see to it, that they faithfully execute this trust. *It was one of the express objects of their organization, that they should foster and encourage American Industry, and defend it from European exaction.*

This done, we shall hear the notes of joy and gladness again resounding throughout the country, instead of the wail of sorrow and despair. Then shall we see the husbandman rewarded in his toil, and the artizan and manufacturer sustained in their praiseworthy and patriotic efforts. Then shall we see new and unusual products, with augmented ones already familiar. Then shall we have prosperity, abundance and contentment at home, and credit and consideration abroad.

R.

---

* The number of emigrant passengers that have arrived in this port from Europe, from Jan. 1 to May 14, 1842, is 15,908, being an excess of 9,338 over the the arrivals during the same time in 1841. They are, generally of the best class of farmers and mechanics who for want of employment at the east, are pushing for the interior and the fertile lands in the far west.

Hoeing crops—*Their resources for water in drought.* Corn, potatoes and other crops will require particular attention during this and the early part of the next month. There is great advantage in frequently stirring the ground, even if there be no weeds to extirpate, and especially if the ground be dry. Whoever has observed the difference in a time of drought, between crops that are neglected, and those where the ground is frequently stirred with the hoe, or plough, or cultivator, will not have failed to appreciate the great utility of this practice. By a careful attention to this, the diligent farmer often pushes his crops far enough ahead, to shade the ground and effectually protect it from the great influence of the sun's rays, by which he secures a fine crop; while the neglect of early hoeing keeps the crops backward, it may be, till the influence of the sun is sufficiently powerful to wither and destroy the crop for the season.

There are two ways in which water is furnished to the growing vegetation by this operation. The first is, by producing the unevenness which is the result of stirring the surface, the radiation or escape of heat from the ground which is imbibed during the day, goes on with great rapidity as soon as the direct rays of the sun are withdrawn; and the air, which is highly charged with moisture, in consequence of having its temperature lowered immediately in contact with the surface, deposites large quantities of dew upon the ground, which is absorbed by the vegetables. This operation is illustrated on every farmer's table during the hot weather, whenever a pitcher containing cold water is placed in a warm room. The air, which is full of aqueous vapor, coming in contact with the vessel, parts with a portion of its heat which passes into the cold body, and agreeable to the invariable laws of chemistry, it parts with a portion of the water suspended in it also. Thousands of people witness this operation every day throughout the summer, and yet never learn where the moisture comes from, which is collected in large standing drops, and often runs down in streams from the sides. These people never studied the principles of chemistry, or they would have known that in what is termed the driest weather, the air is really most full of water, held in a state of invisible vapor. We have all convincing proof of this, whenever the temperature of the air is lowerd by the action of electricity, and the gathering thunder clouds make their appearance on a sultry summer's day, and anon pour down volumes of *liquid air.* While snugly ensconced under a shed, and rivers of water were pouring over the eaves, and the pelting storm seemed as if it would come through the solid roof, did the reflecting farmer ever ask, Whence came this deluge ? A few minutes before, the heavens were unclouded and transparent as glass, and the naked eye could reach through space beyond the fixed stars—now he can hardly see a dozen rods. Whence came this world of waters ? The wind has scarcely stirred the quivering aspen, and therefore could not bring on its loaded wings, this burden from the sea. A single remark explains the whole of this striking scene. The air when hottest, is most full of water, being capable of holding the greatest quantity when its temperature is highest; electricity has reduced the heat of the air, and instantaneously the lower temperature compels the air to disgorge a portion of the water it has held, and down it comes in torrents.

Now, precisely this operation is carried on when the dew falls, except that the heat is abstracted from the air not by electricity, but by radiation passing upwards through space, and into the ground when its temperature is lower than the air, and at the precise instant the temperature of the air falls, it begins to deposit a portion of its moisture, thus supplying the vegetation with water by its roots through the ground, and by its roots and leaves, which, in consequence of their rapid radiation of heat, and becoming cold, condense considerable quantities of dew upon them.—These operations are augmented just in the proportion to the roughness of the surface and the dark color of the vegetation and ground; illustrating in this, two other principles in chemistry; 1st, that radiation is greatest in black, and least of all in white; and 2d, it is also proportionate to the roughness of the surface. A black kettle covered with soot will imbibe and part with heat in an incredibly less space of time, than will a polished white vessel similarly exposed.

We see from the above explanation, how beneficial it is to the farmer, to have his land well blackened with manure, to meet the contingencies of drought, and how his rank, dark vegetation drinks in the moisture from the air that surrounds it, while the yellow puny vegetables are incapable, perhaps, of absorbing it in sufficient quantities to save even their existence.

But the second way that hoeing the soil affords water to growing crops, is by the direct formation of water in the ground. This is done frequently in great abundance, when the soil is well charged with hydrogen by the manures, or geine, contained in it. By moving the surface and bringing portions of the soil to the air, a combination with the oxygen of the latter is effected, and water is the result, which is thus directly furnished to the roots of the plants. The amount of water conveyed by these two methods to an acre of growing crops during very hot weather, is almost incredible. But this need not be deemed unworthy of credit by the most prejudiced and least informed, when he can prove to himself by ocular demonstration, that *by burning a certain invisible air or gas, he can produce water.* Of this he can satisfy himself, by placing a few pieces of iron or zinc in a large glass jar, containing water and a small quantity of oil of vitriol. This vessel is to be closely covered and a tube inserted, of the size of a small quill from the wing of a bird. You will at once perceive a commotion in the liquid, occasioned by the combination of the oxygen of the water with the metal, for which it has a great affinity, and the bubbles are the hydrogen gas escaping upward, after its disengagement from the oxygen. This gas is inflammable, and as it issues through the the tube, by applying a lighted taper to it, it immediately takes fire. This is simply a re-combination of oxygen from the atmosphere, with the hydrogen, again forming water; which is shown by holding a glass tumbler over the flame at a little distance, when the water will collect in globules or large drops. Now if any of our uninitiated readers will take the trouble to try this experiment, he will find what we say is true, from which he may infer that what we have before said, though we have not room now to prove it, is equally true. And as it is a matter intimately connected with the success of his crops, we earnestly recommend him to apply these principles to practice. We may probably elucidate this subject more fully hereafter.

We will only add in conclusion, that corn, potatoes and other crops requiring the hoe, *should not be hilled,* unless the ground is liable to excessive moisture, which it ought not to be for any tillage crop; and then a large broad hill should be made, to allow the roots to form above the too wet ground. In all other cases, experience shows that crops will yield much better without hilling than with. Care ought also to be taken, to avoid cutting off the roots in hoeing, as just so many arms or feelers for the supply of nutriment to the plant are cut off, that require time and food from the parent plant to renew, before it can enjoy the full benefit of that aid, of which it has thus been deprived.

R.

Transplanting Evergreens.—June is the month in which this should be done. For this practice, we shall give our readers two substantial reasons. *Experience* has proved it to be the most proper period, as many more live when transplanted at this time, than at any other; and a knowledge of the habits of this class of trees, gives us the rationale for expecting such a result. The sap in evergreens and all resinous trees, circulates freely throughout the winter, and of course it is necessary to sustain the life of the plant effectually, that it should have access to all the nutriment it can extract from the soil, under the most favorable circumstances of the perfect adaptation of its roots to this object. The summer months is the season of the year when the roots develope themselves most fully, and when of course they can best withstand the violence of being torn from their native bed, and accustom themselves to a new situation. This operation performed at any other time, subjects them to the necessity of supporting their foliage, from the time of their removal till this period, which of course incurs the hazard of the loss of the tree. It is a judicious plan to cut off the long roots a year before removing, which stimulates the production of a great number of new roots in a small compass near the trunk, and it is these small roots, the more minute the more effectual, that afford the greatest support to the tree.

The greatest Race on record.—It is no part of our intentions, to chronicle the trials or tiumphs of the turf. There may be more or less connexion with the stouter kinds of racing bloods and the *farm horse*, as there generally is with the carriage horse or roadster, and with manifest advantage to the latter. But as a general rule, we are wholly opposed to this mode of testing the value of breeders; and if decidedly advantageous as a method of proving the requisite qualities of serviceable horses, we should consider the *cost* in time, money and morals, far exceeding the value to be derived from it. But to the race extraordinary.

This was run on the Union Course, Long Island, May 10th, by Wm. Gibbons's ch. m. *Fashion*, by Imp. Trustee, out of Bonnets O'Blue, by Sir Charles, 5 yrs. carrying 111 lbs. and rode by Jos. Laird; and won by her against Col. Wm. R. Johnson and Jas. Long's ch. h. *Boston*, by Timoleon, out of Robin Brown's dam, by Ball's Florizel, 9 yrs. old, carrying 126 lbs. rode by Gil. Patrick. The mare won the two first four mile heats in the incredible short time of 7 m. 32 1-2 sec. first heat, and 7 m. 45 sec. in the second heat. The race acquired great interest from being a trial between the South and North, and as in the great race between these extensive parties, decided by their champions Eclipse and Henry, in 1823, the North came off victorious. The former race was run in a trifle more time, the two first heats being 7 m. 37 sec. and 7 m. 49 sec. Sixty thousand people were estimated to have been present. $20,000 were bet between the parties, and a very large amount among others.

Lusus Naturæ.—No freak of nature has ever surprised us more, than a Spanish bull of a dun color, now about 8 years old, exhibited near Tattersall's in Broadway. From his breast internally to his hips, he has apparently *a double organization*, double viscera, terminating in double organs of generation, and double ani, located on either hip. Between these is an excrescence reaching nearly to the ground and terminating in double, dwindled hoofs. The animal is of moderate size, very broad for his height, and evidently a twin conception in part, but consolidated into one.

There is also a cow exhibited with only three legs, the left fore leg never having been developed, but apparently existing internally in an imperfectly organized state.

The lovers of *large stock*, who are indifferent to symmetry or the *fitness of things*, may find with the above associates, a big, black bull, that is said to have weighed last year 4500 lbs. We should not have disputed the weight if reported twice as great. But it is size without merit, *extension* without purpose, and has no charms for us. A Missourian would probably characterize him, as half locomotive and half allegator with a touch of *an earthquake.*

To make Hens lay perpetually.—A correspondent of the Cultivator writes "Give your hens half an ounce of fresh meat each, chopped fine, once a a day, while the ground is frozen, and they cannot get worms or insects; allow no cocks to run with them; and keep no nest egg, and they will lay perpetually." There is reason in the suggestion. Try it. But 'tis necessary they should be confined or without a nest egg, they will probably lay where it happens. They also require plenty of grain, water, gravel and lime.

Our friend and correspondent, J. R. Moser, Esq. of Flint Rock, N. C. asks as to the renovation of exhausted pine lands? We have no room to answer the enquiry in this number, but will do so at length in our next.

NOTICES OF NEW WORKS.

We have room only to notice the publication of the proceedings of the N. Y. State Agricultural Society, for 1841, a handsomely bound octavo volume, of upwards of 400 pages. It contains several well executed cuts of animals, and a large collection of valuable correspondence and essays, on the various topics of interest to agriculturists generally. We shall condense some of the most practical essays, and present them to our readers at an early day.

LADIES' DEPARTMENT.

Transplanting Wild Flowers.—To the lovers of flowers in their countless variety and beauty, we would earnestly recommend the introduction of many species of wild flowers, indigenous to our soil and climate, into the Floral department of their gardens. There is *simplicity* in all wild flowers, and simplicity is always an element of beauty, though beauty is sometimes augmented by a combination of simple elements. The Passion flower, and the Corinthian order of architecture, are striking examples of these.

Most of the cultivated flowers have been more or less changed in their characters, by their domestication and subsequent mixing with others; and from this results increased size, and generally a great addition to the variety and number of the petals of the flowers. This is shown to its greatest extent in the endless variety of roses, and in the Cabbage rose, particularly, its increased number is absolute deformity, for the petals are there so numerous, as to be completely rolled into wads. The Peony is another example of beauties so closely and immethodically huddled together, as to be unsightly. How different is the simplicity and unaffected beauty of the white or carnation thorn; the sweet briar; and the luxuriant though unpretending beauty of the Michigan rose! The white Japonica, how simple, yet how beautiful; and how apt an emblem of that purity, the study and pursuits of nature have so direct a tendency to produce!

The Dahlia, that brilliant and fashionable flower, so varied in its colors, so full and finished and elaborate in its arrangements, so just in its proportions, so gorgeous in its hues, partaking more of the Dove's metallic lustre, than of the light, transparent pencillings of our ordinary flowers, is a native of Mexico, and there exists in a simple form. We have seen many flowers on the Western prairies, that bore a strong resemblance to the Dahlia, and have no doubt but that cultivation would so far improve these, as to render them at least, formidable rivals. There is generally a great development in the parts of the plants that are subject to cultivation, greater luxuriance, variety of form, and increased brilliancy of color. A single example may suffice. A recent writer in the Genessee Farmer, says, " a little blue bell flower, about the size of an acorn, hanging on a stalk a few inches in length, but so slight as to be moved by every breeze, was transplanted to the garden. The second season, in place of a single flower, it produced a succession of them from June to October, on stalks 3 feet high, often three bells on a stalk, and in one instance 50 were counted!" What would not some of our lady admirers of these things give, for such an addition to their flower beds? Yet many may be obtained, perhaps equally brilliant, in their own neighborhood, could the timid little natives, that now "waste their fragrance on the desert air," be sought, and by kind entreaty and discreet care, be adopted among the cherished things of civilized culture.

In transplanting, care should be particularly paid, to give the plant as nearly the same soil and circumstances as those by which it was surrounded in its native bed; and if found in different circumstances, as they frequently are, choose from these, such as is most convenient for its new situation. It not unfrequently happens that a considerable change may be made in the habits of the plant, without danger to its existence, but it is proper to avoid the risk of this, till partial cultivation has developed its character, and somewhat accustomed it to its new position. R.

For the American Agriculturist.

Development of Character.

May, 1842.

Gent.—Forty or fifty years ago, industry was considered honorable, and those young men who were so fortunate as to have parents who could assist them in getting an education, when at home during their school or collegiate vacations, took pleasure and considered it a credit, as well as a duty to assist their parents in doing whatever was going on at home, thereby enabling them to do something for their other children, as but few were able, nor did they wish to educate all their sons for a profession, but thought it *all* important (I am speaking of New-England) to give them *all* a good common school education, and bring them up in habits of *industry*, morality and religion.

There were those whose parents could not give them even a common school education without their own personal exertions, who, after doing all they could at home, would go out and do little jobs for their neighbors, by which they earned a little for themselves and were *kept* from the *habits* of *idleness*, which finally led them to acquire good education and become useful and respectable members of society. Many such cases I *knew*, but there was one of which I had a particular knowledge, which I will give you.

A poor, but respectable and pious man, living in Connecticut, had several children, the eldest of whom was a son, who assisted him in tilling a few acres of ground, divided between corn and potatoes, beside a small garden for vegetables. This son would get permission of his father to go and ride horse for a neighbor, when he always took his book in his pocket, and when he got a few rows before-hand, would tie his horse and sit in the shade and study his book, so that while he was learning a little, he was laying up a little for future use. When about seventeen, the time I first knew him, he had obtained the employment of distributing the Hartford and Litchfield newspapers. He came along once a week with the papers, which occupied one side of his saddle-bags, while the other was filled with oranges and lemons and other things, which he sold to the country people at a good profit. He continued this business about three years, when he went into a law office, became a distinguished advocate at the bar, educated a younger brother, who was little less eminent than himself; became Judge of the Supreme Court, while his brother became a Senator in Congress. I have been more lengthy and particular to shew what good moral principals, industry and perseverance can effect.

When our country was comparatively poor and the young men were brought up in habits of industry, how much more moral worth and weight of character was possessed and exhibited in our public men! This moral delinquency can be traced, I think, from the present superficial mode of educating young men without proper moral or religious culture.

According to present custom, they grow up in comparative idleness, with sufficient knowledge of writing and arithmetic to officiate as a clerk in a Bank or counting house, and having friends of *some* influence possessing *too* much pride to have a relative become a farmer or mechanic, who recommend him as a clerk where money, that root of all evil, is too powerful a temptation for an *empty* mind, *un*improved by good instruction and *un*braced by moral or religious principles, becomes too strong, and hence so many frauds and robberies, too great to have been imagined by one under the old regime.

In short, gentlemen, we must go back to the customs of former days. Until we do, we may look in vain for prosperity. The astonishing depravity which pervades our whole land calls aloud for reform—not in the males only, but the other sex have insensibly departed from the pure and useful habits of their grandmothers, which, however, has been more owing to the pride and indiscretion of their parents, than to any fault of their own. I may at some future time, give them some hints for reflection.

Yours sincerely,
Octogenaria.

For the American Agriculturist.

Our envied country dames are doubtless improving the delightful season of May and June, peculiarly our vernal months and Flora's gala season, not only in renovating their bloom and beauty under its soft skies and healthful breezes, but in the keenest enjoyments of those flowery treasures whose brief day will so soon be over. Our " merry, merry month of May" opened under the most animating and delightful auspices. The air was redolent with a thousand sweets from the native wilds and the surrounding gardens, and while every breath is fragrance, the eye revels in a world of verdure and beauty, and the ear takes in the most soothing and enchanting melody; the sweet notes of various birds, the rustling foliage and the louder waterfall, or the little rivulet as it dances gaily over its mossy bed, all have their grateful tale to cheer the desponding mind, and to give a livelier glow to the more youthful and ardent, and insensibly proclaim His praise *whose* are " the beauties of the wilderness"

> " That makes so gay the solitary place
> Where no eye sees them, and the fairer forms
> That cultivation glories in."

Our city belles must hasten to their sub-urban, or more distant country retreats before the summer solstice has mounted its throne, or the rich variety of delicate and lovely flowers, which now lift their rainbow faces in every sheltered copse, and beside each native hedge, will be sought in vain; like past pleasures in retrospect and as transient. Then seize the moments as they fly, and while you glean flowers by the way, aim to draw a useful moral, even from the short-lived playthings of creation. Let us go first to the velvet meadows every where enamelled with flowers, where are the wild Geranium, *Americanum*, because our only one; the delicate *Vicia* or Vetch with its *papilionaceous blossoms* and graceful tendrils; the blue and white Lupines just passing away; the wild daisy which Burns so beautifully soliloquized after prostrating with his plow,

> Wee, modest, crimson tipped flower,
> Thou's't met me in an evil hour;
> * * * * * * *
> To spare thee now, is past my power
> Thou bonnie gem.

The *Convallaria*, Solomon's seal, with the graceful bell-flowered Uvularia; the more striking *Erythronium* or Adder's tongue, a beautiful lily with mottled leaves; the *Aquilegia* or Columbine as fragile and more imposing; and that little flower our once tiny hands delighted to gather, the shining *Ranunculus* or butter cup. Ah! who will not in this merry month of fleeting joys, revert to their happy childhood of violet and daisy memory, when the last one plucked was still the fairest, and not one simple flowret passed unnoticed. Sweet days and most blessed memory! whose impress on our somewhat seared hearts, is yet fresh and green. But we must not linger here. We will now to the sedgy streams and to the sylvan dells where we find numerous varieties of the brake. Among these, the exquisite *Asplenium* or Maiden's Hair; the *Trilliums* or wake robin, purple, white and *variegated*, more conspicuous in our Western woods and well worthy of cultivation; the *Lychnedia* with lilac-colored blossoms surrounding their tall and slender stem, here and there too, a *Podophyllum* or Mandrake like some of the preceding, a flower of May, which has lingered awhile to gaze on the more gorgeous bloom and loveliness of June, and in some shady copse you may, perchance, find that curious plant which from its cup-shaped blossom sometimes, 'tis said, affords refreshment to the thirsty traveller, the side-saddle flower, or *Saracenia*, so called from its fancied resemblance to the head-dress of a *Turk;* the *Asclepias*, milk weed; and the beautiful *Orchis* tribe; and above us, throwing up its white petals into some branch of a neighboring tree, more green and lovely than the parent one, is the *Cornus Florida* or Dogwood. But look where we will, we can find no shrub or flower more beautiful than the superb *Kalmia*, the Laurel, and only those know who have seen it in its perfection, what enchanting beauty and magnificence it lends during its short-lived reign, to eastern woods. Pity it so ill repays the effort at cultivation.[*] We have found the more shady its retreat in the deep woods, the darker and more glossy its classic leaves, and the more roseate the hue of its rich and *dew-textured* blossoms. Among our Northern forest shrubs, we think it bears the same relative position, as does the far-famed Magnolia[†] of the South in their flowery month of March, to the jessamines and myrtles, and various other plants raised with care in our conservatories, but which form the lovely hedge-row ornaments of that sunny clime. But we are out of our latitude, and we would fain return again to the beauties of our own woodland scenes were they not too numerous to enumerate in detail, but we must allude *en passant* to the *garden* which now pays richly for the care that has been bestowed on it. The *Roses* are this month in perfection, and cast all other cultivated flowers in the shade, for who will long dwell over the tributary beauties of the parterre when the queen of flowers and of sweets, every where commands our homage and admiration? The beautiful and fragrant *Lilies* are also in their prime, and as usual, enter into competition with the rose. But to pass all these brighter glories by, better, we say, the lowliest flower that lifts its head from the bountiful bosom of the teeming earth, than *none at all*, for the humblest petal displays inimitable skill, and is a lesson to the overwise who too proudly esteem the finite mind; and is ever a welcome to guileless and trusting infancy; And who shall say there is not a lesson in every page of nature's book, in the flowers we tread upon, as well as in the stars of light which irradiate worlds and systems like our own! We quote the sweet sentiments of Mary Howitt, in answer to the query,

> "Wherefore had they birth?
> To comfort man, to whisper hope,
> Whene'er his faith is dim;
> That whoso careth for the flowers
> Will care much more for him."

The thrilling influence of the retrospect of these sunlit, flower-decked, happy, childhood hours, may be gathered from the exquisite reflections of Madame de Genlis. "O, how much sweeter is it to me, to recall to my mind the walks and sports of my childhood, than the pomp and splendor of the palaces I have since inhabited. All these courts, once so splendid and brilliant, are now faded; the projects which were then built with so much confidence are become chimeras. The impenetrable future has cheated alike the security of princes and the ambition of courtiers. Versailles is drooping into ruins. I should look in vain for the vestiges of the feeble grandeur I once admired, but I should find the banks of the Loire as smiling as ever, the meadows of St. Aubyn as full of violets and lilies of the valley, and its trees loftier and fairer. There are no vicissitudes for the eternal beauties of nature; and while, amid blood-stained revolutions, palaces, columns, statues disappear, the simple flowers of nature, regardless of the storm, grow into beauty, and multiply for ever."

Hannah More, the impersonation of purity, judgment and good taste, after her eightieth year, said "the only natural passion left to her, which had lost none of its force, was the love of flowers." Lay up, then, my youthful friends, a rich store of pure and happy recollections for old age to dwell upon and revel in. Ella.

Making Bread.—To make good bread, good flour, good yeast, and good management are required. One of the simplest processes of making it is as follows: To 8 quarts of flour, add 3 ounces of salt, 1-2 pint of yeast, and 3 quarts of water, of moderate temperature, and the whole being well mixed and kneaded, and set by in a proper temperature, will rise in about an hour, or perhaps a little more. It will rise better and more equally if the mass be covered. It must undergo a second kneading be formed into loaves for the oven. The more bread is kneaded the better it will be. Be careful not to allow it to become sour in rising. Milk will make white bread, but it will not be sweet, and dries quicker than when made with water. If loaves are lightly gashed with a knife around the edges before they are put into the oven, cracking will be avoided in baking. From an hour to an hour and a half is required to bake bread fully.

N. O. Pic.

---

[*] Can any of our readers afford to the florist a hint for its successful cultivation.

[†] The Magnolia at the South is a large forest tree.

For the American Agriculturist.

CONNECTICUT VALLEY.

Concluded.

Merinos.—I am here reminded of a fine selected flock of Rambouillet Merinos, now in the possession of Daniel C. Collins, Esq., of Hartford, which he imported at considerable expense about two years ago from France, with a view to improve and re-establish the original stock of Merino sheep in this country. I hope he will favor the public with an account of them, and his success in their culiivation. I cannot but believe that frequent importations of original rams from the select French and Spanish flocks, will aid much in keeping up and improving the Merino stock in America.

At Northampton, I observed the anthracite coal of Pennsylvania was considerably used for fuel, being brought up the river in boats so cheaply that it competes successfully with wood, now in a great measure cut off from those lands susceptible of cultivation, or which yield but a sufficient supply to furnish ordinary building, post, and fencing timber for enclosures. An improved cultivation generally is evidently prevailing throughout New-England, and with its increasing wealth, we may look for a higher agricultural standard than now prevails. In domestic animals the yankee farmer is slow to change. The "good enough" practice has long held sway; yet occasional sights of a Berkshire or China pig on the premises of a tidy farmer, indicate that a reform is in progress in the important item of their pork material, as well as by glimpses of the spotted or roan outline of their neat stock in the farm yard or pasture, it is evident that "red" is no longer the *summum bonum* of all excellence in that quarter.

Western Railroad.—I returned to Springfield, and after riding with a friend through its pleasant streets and around its delightful environs, built up and cultivated with the exceeding neatness and good taste which distinguishes almost every town and village in this valley, I retired for the night to my lodgings. The next morning I took my seat in the cars of the Western Railroad for Albany. Of this noble structure I can speak only in terms of unqualified admiration. After a course of 12 miles from Springfield, it enters the mountain region of western Massachusetts, and passes up thence for 20 miles to the summit in Washington, one of the most wild, picturesque, and difficult valleys in New-England. Through this confined hollow the Westfield river rushes, a wild, and maddened stream, which the impatient engine, whirling along its rapid train of cars, to avoid the obstruction of an impending mountain, anon leaped, and followed, with scarce enough of soil to rest upon, at times even jutting over its torrent at the hazard of apparently impending destruction. Gigantic masses of solid granite fifty to eighty feet high, were cleft asunder for its passage, until it had attained the summit 1400 feet above the tide waters of the Hudson at Albany. Here, on the dividing crest of the Green Mountains, crossing a considerable lake, whose limpid waters poured into either channel of the Housatonic and Connecticut, it commenced its descent for some miles along the declining mountain into the charming village of Pittsfield, delightfully nestled in a fertile and luxuriant valley; and thence, by a tortuous course, to the plain of West Stockbridge. It is a great work, worthy of the bold enterprize of those who planned and accomplished it; and a monument of glory to the State. Aside from its principal object of connecting the two great cities of Boston and Albany, it is of infinite service to the agricultural and manufacturing interests of Massachusetts, whose productions are thus brought within a few hours distance of the best market in New-England. This mountain region is mainly a grazing and dairy country, the hills being principally covered with pastures and meadow lands; while the vallies, although mostly grazed, yield tolerable supplies of grain. Butter, cheese, beef, and pork are its principal agricultural productions, a great part of which is consumed by the manufacturing population among them. Many fine herds of native cattle and excellent flocks of Merino sheep are grazed here; and no country, perhaps, on earth can boast a finer and hardier race of people than the county of Berkshire. Appearances of thrift and worldly comfort spread out on all sides, and the results of well-applied industry are visible in all their farms and villages; and although their soil be comparatively sterile, and their climate severe, their active sagacity, their well directed intelligence, and their never tiring industry accomplish for them what without these requisites, the richest soils and greatest local advantages would deny.

At West Stockbridge the depôt of the great marble quarries of that region, we were met at the State line by the train of cars from Hudson. They contained divers passengers from that city and from Kinderhook, composed of lawyers, members of Assembly, and office seekers, who were going to Albany in readiness for the commencement of the annual session of the Legislature the next day. Here, meeting several old friends and acquaintances, politics and its etcetera attendants of Albany Regency and Whig declension in New-York, became the topics of discussion; and, being an old stager in those matters, I could not resist the temptation to mingle in the debate, and my agricultural musings ended with the soil of Massachusetts. L. F. A.

To breed Males or Females.—We have heard it asserted by distinguished breeders, that in seven cases out of ten, when the progeny was single, they could produce a male or female offspring as they might wish. We have had some experience in this matter ourselves, but never obtained any thing like the certain results above expressed. But we will give the rule:

Should the sex required be represented in the intended parents by the most stout and robust, or the one possessing the highest condition, the rule would require them to be coupled in this condition, increasing their relative diversity perhaps for the occasion, by exhaustion on one side, and augmenting the vigor on the other. If the weakest or lowest in condition possess the sex sought, the physical superiority of the most athletic, should be temporarily changed so far as possible for the occasion, by partial exhaustion or fatigue, as might be done in a variety of ways, especially if in the male, by sexual exertion.

Some learned writers have contended, that the sex of human progeny is determined by the advanced age of the parent, the one decidedly (*relatively*) the oldest, controlling it, and though true enough frequently, may yet be considered an accidental result. Walker who has written latest and fullest on this subject, we never considered as any reliable authority, and we have perused his works more for the purpose of noticing the development of his startling theory, than any established or well authenticated principles. The matter is, however, worthy investigation, and we shall be glad of the experience of such gentlemen as have made sufficiently extended and accurate observations from which to draw general and incontrovertible conclusions.

Llangollen, Ky., April 22, 1842.

Gent.—We have had no winter in Kentucky, and vegetation is three weeks earlier than usual this spring, as you will perceive from the following memoranda:

March 10. Erythronium in flower.

14th. Sanguinaria Puccoon do.—Flower buds of the Sugar Maple swelling.

20th. Open—Leaf buds swelling.

April 1. Open—Leaves full grown 22d.

Acacia, black locust, in bloom 22d April. Leaf buds of the black walnut (the latest tree here in acknowledging the influence of spring,) swelling 10th April. 22d. Leaves expanding, but not fully grown.

April 15. The white bractes of the Dogwood (Cornus Florida) expanded.

17th. Judas-tree (Cercis) in bloom—Strawberry, cherry, peach-fruit set 12th.

22d. Flower buds of the vine appearing—many of the leaves full grown.—Panicles of Kentucky blue grass and of orchard grass coming out 16th April, and Dandelion seeds ripe and flying off.

The early influence of spring is felt too in the waters. In the smaller streams the fish were spawning on the 1st April, and the crayfish are now, 22d April, all in a soft state. The snakes, both of the land and water, were out and as brisk as in midsummer, on the 8th and 10th April.

What are the accidental or rather occasional causes which produce such remarkable differences of temperature in the same latitude, and on the same isothermal line in different years? Does the earth, in its revolution on its axis, affect the position of the internal, or as it is called, central fire so as sometimes to bring it nearer to the external crust on one side than on the other? Is this going *too deep* for the cause?[*] Perhaps it is, but I do not know it; and I do believe that there must be and are other causes than those usually assigned for the variations of temperature so great and extensive as do occur.

I have just received the first No. of the "American Agriculturist," and congratulate you on its contents and *form*. The book form is decidedly the best for all periodicals worth preserving, and none are worth taking by a farmer which are not worth preserving. But their preservation is not all. The form of large papers renders them very inconvenient and tiresome to the arms to read, if you keep them expanded, and if not, you are constantly folding and unfolding to get at the contents.

With sincere wishes for the success of the Agriculturist, I am, gentlemen, very truly, your obedient servant, John Lewis.

P. S. In walking out this evening I find the May apple (Phodophyllum) in full bloom.

The following was handed us by an intelligent friend and correspondent who was present at the meeting.

For the American Agriculturist.

National Agricultural Society.

Gent.—I drop you a line for the purpose of informing your readers that the anniversary of this Institution was held in Washington on the 4th and 5th intstants. The numbers in attendance were small, and the delegates, principally from New-York and New-Jersey. The meeting took place in the beautiful building recently completed for the Patent office. The President, the Hon. Mr. Garnet of Virginia, took the chair:

---

[*] In opposition to the suggestion of our esteemed correspondent, we are compelled to believe from extensive observations that have been made to test the influence of internal heat, that it never approaches sufficiently near the surface, to affect the temperature of our atmosphere. The only way *internal* fires can affect *external* temperature, in the present condition of the earth, is through the influence of *volcanoes*. These, when generally in a very active state, will doubtless produce an effect on the atmosphere, that may be felt over the entire Globe. But we are not aware that this cause has operated in producing the mild weather during the past winter. There is no doubt, from the rapidity and extent of atmospheric currents, that the *causes* of variations, from an ordinary condition of temperature in any given latitude, may exist thousands of miles from the region affected. Indeed, *we conceive this to be the solution of the whole question.* We believe sufficiently extensive observations have never yet been made to test this matter fully, but we have noticed the fact, that frequently when a season has been unusually warm in one longitude, another has been at the same time, as remarkably cold. Now, may it not be, nay, is it not in the highest degree *probable*, that in the region of unusual warmth, unwonted currents of atmospheric air, elevated in their temperature, are wafted to it from the torrid zone, and other regions are fanned by breezes from the frozen North? That the force of these winds is not strong, and always indicating the heat or cold by the direction from which they come, even if accurately noted, and exhibiting a result different from what is to be expected, would not be a conclusive objection, when we reflect that the atmosphere possesses considerable density 40 miles above the surface of the earth, and that it is a sufficiently well attested fact, that numerous currents of air are constantly passing in every direction at the same moment, over the same point; and the checks and counter currents coming in contact with any given one, may alter its direction and cause it to impinge upon the earth in a direction contrary to its natural (usual) course. Clouds, by intercepting the sun's rays; and evaporation, by abstracting radiating heat, and locking it up in a latent state; and rains by condensing vapor and liberating it, (the latent heat,) are all operating causes in affecting the temperature. But the subject opens a wide field for observation, and our limits will not permit us to pursue it. B.

and delivered a very sound and interesting address, which will soon appear from the press. Mr. Callan acted as Secretary. The principal business done was the appointment of two committees—to report on the advisableness of a publication in the service of the Society, and the expediency of instituting an annual cattle and agricultural exhibition in Washington. The Chair nominated on the first committee, Hon. H. L. Ellsworth, Rev. J. O. Choules of New-York, and Dr. Ives of New-Haven, Conn. They reported in favor of such a publication to be issued under the patronage of the Society, but to subject it to no expense. The other committee recommended the call of a committee of gentlemen from the various States, to meet in Philadelphia, the second Tuesday in July, to determine upon the arrangements for a great National exhibition to take place in Washington.

The delegates from New-York were Messrs. Nott, Prentiss, Rotch, Bergen, Johnston, Tucker, Choules and Wakeman—and Mr. Horner from New-Jersey. The Hon. Mr. Woodbury, Mr. Elisha Whittlesey, Mr. Warren of Georgia, and some other public men were present during the session.

Mr. Garnet was re-chosen President.

Very respectfully, G. P. T.

For the American Agriculturist.

RAISING CALVES.

Black-Rock, May, 1842.

We have frequently heard the question mooted, What is the best manner of raising calves?

To this, several answers may be given, according to the use and purpose for which they are destined. But to make the subject familiar and illustrate it fully, we will answer *seriatim.*

1st. For veal. Fatted calves, if the circumstances of the farmer, and the price of the article will warrant, should be kept till five or six weeks old. From their birth they should draw all the milk fresh from the cow that they require; or at any rate all she will yield, if it be not more than the calf will drink. To the milk, if not enough is yielded by the cow, a light boiled gruel of any sort of meal may be added, with a trifle of salt. This gives a fine flavor to the veal, and assists in the fattening. It is a very simple operation, and attended with little trouble. If the dam be a great milker, it may suck thrice a day. Many people give their veal calves only part of the milk when they require more. This practice may make veal *after the fashion*, but it will not be *good* veal. The best can only be made by giving the calf *all it will eat.*

2d. For making fine blood stock, and acquiring early maturity. Let the calf have *all* the milk the cow yields, if he will take it. As soon as he will eat roots, meal, hay, or grass, let it be fed all it wants of these, or either of them. The animal will pay in price and appearance for extra attention, and its early development will amply recompense the cost. No *first rate* animals can be produced without full and regular feed. In this practice, the calf may either run with the dam, or be enclosed by itself in a stable, pasture or yard. All such, however, should be early broke into control by the halter, and made entirely manageable. They are, besides, least troublesome, reared in this method.

3d. Those intended for store cattle, and for working oxen, beeves, and milch cows for common purposes.

For such uses, calves may be reared in different ways. Milk is always the first and indispensable food for young animals, and of this the calf in its early days should not be deprived. It is absolutely necessary for its existence, however, but a few weeks after birth. In those sections of the country where cows are kept for the sole purpose of breeding and raising their progeny, and the dairy or milk forms no part of their profit, no better plan than to let them run with the calf, can be adopted, care being taken that the surplus milk, if any, be daily drawn from the udder, to keep it in a healthy condition. But where the milk is required for dairy purposes, the calf should, after the second day, be entirely taken from the cow, and learned to drink by the finger. This need only be continued for a day or two in most cases. After a fortnight, skimmed milk, or whey, or a light porridge, or gruel of *boiled* meal (raw meal at *first* is injurious to the calf, causing them to scour,) may be added according to circumstances. The condition of the calf should be watched, and the food regulated, enriched, or reduced, as its appearance may require, and in a short time it will eat grass, meal, roots, or hay. The animal, however, requires continual attention, and a woman after all is the best nurse for a young calf. We have indeed often known fine stocks of calves raised with very little milk, the principal early food being hay tea, and the docile, petting care of the faithful nurse. *Good nursing is almost every thing, for without it calves, with a scarcity of milk, will not thrive.* Salt should be used freely and placed where they can get it when they like, and if at all inclined to scour, a lump of chalk should be placed within their reach, or a small quantity pulverized with their food. Young stock, to be sure, raised in this way, will not so readily attain their growth to two years, as if raised at the foot of the cow; but, ultimately, will reach their full size and good qualities. Such need a little more care, and keep better the first winter than the latter, but after that, are equally hardy and thrifty. They require good shelter, to be kept clean, and free from vermin; and may then go on their way rejoicing.

We can only repeat, that no one can be successful in raising *any* kind of stock without care and good attendance. These are indispensable, and the females, and young, and old folks, on the farm, can always attend to this department. The time of the farmer and out-door laborers should never be abstracted in the busy seasons for small choring of this kind. We have known many farmers' wives, and quite *genteel* folks too, who have raised their score, or half-score of calves annually, and they hardly knew that they had eaten any thing from the material of their dairy. L. F. A.

We have been favored by a highly intelligent and esteemed friend at the South, with the following article on the cultivation of one of our southern staple articles. We commend it to the careful perusal of our southern readers.

On the culture of Rice, from the pen of the late Hugh Rose, Esq. being in answer to queries from the late William Washington, Esq., both of whom were most respectable Rice planters in the State of South Carolina.

Query 1. What preparation do you give your land before you begin to plant?
2. When do you begin to plant?
3. Do you select your seed, and how do you know the best seed? Do you prefer seed from the North or South, and how often do you change your seed?
4. How many rows to the task or quarter of an acre? How many bushels of seed to the acre?
5. Do you scatter in the trenches, or as it is technically called, string plant?
6. Do you point-flow? If so, assign the reasons.
7. How many times do you hoe before you put on the water?
9. If in grass, would you put on the water or not? What do you call a good crop to the acre, or to the hand?
10. Have you ever ploughed your land while the crop was growing? or do you object to it, and why?
11. Do you keep your land dry all the winter, or do you flow it?
12. Have you ever used salt or brackish water, and what has been the result? Have you ever used lime on your land, and how do you apply it?
13. How do you know the best time to cut rice, and what is the task of a laborer in harvest?
14. Is there any peculiarity in your preparation of rice for market?
15. Do you ever judge by the roots of the health of your rice?
16. Have you ever practised a succession or rotation of crops, and if so, which do you most approve of?

Answers as follows in the order in which the above queries are submitted.

Query 1. I cultivate inland swamp, of a strong tenacious blue clay, which I strive to reduce to a good tilth, by ploughing a portion, and always digging what I cannot plow. I harrow twice before planting, in as dry a state as is practicable.
2. My land being cold, I seldom begin to plant before the first week in April, and never earlier than the 25th March.
3. With respect to the first question, I reply, that I occasionally change my seed, and procure it from tide swamp, of light and rich soil, not regarding whether it is north or south of me. I judge of seed by its weight and being free from grains of white and red rice.
4. I plant altogether in half acres, 150 feet square; and after repeated experiments, to ascertain the distance best adapted to my land, I have determined in favor of 14 inches, and sow two bushels of seed to the acre.
5. I observe a medium between the two, and neither sow very broad or narrow. I have never planted on string, as it is termed.
6. Being dependent on reserve water, I never have had recourse to the point-flowing.
7. I hoe twice, and do not then water, unless a dry state of the land renders it necessary. I do not advocate for early or long watering. I do not water beyond ten or twelve days, until rice is in the second joint.
8. My reply to the last query will answer this also.
9. There is much grass that flourishes in water, and unless in a very young state, would not be destroyed. The red and white shank for instance, with other water grasses. If there is a large portion of the crop grassy, I would have recourse to water, as much of the grass would be destroyed. I consider fifty bushels of rice to the acre a fair and good crop on an average, or ten barrels to the hand.
10. I have ploughed a small portion of my rice, when I planted the distance of 16 inches, but I soon discontinued it, as no material advantage resulted from it.
11. I kept my land flowed until February, if practicable, for the use of a reserve mill.
12. I have never used salt or brackish water on my land. I have this year limed an acre of rice, at the rate of 22 bushels spread on the land after ploughing, and harrowed in previously to being trenched. I am at present ignorant of the result from personal observation, but am informed there is no visible difference in favor of the part limed.
13. When three or four of the lower grains are beginning to turn yellow, is, I think, the proper time to begin to cut; and if the rice stands well up to the husk, three-quarters of an acre is a reasonable task in cutting. The tying and carrying to the barn yard must be regulated by distance and other circumstances.
14. I used one of Mr. Lucas's water mills,[*] without any peculiarity as to preparation.
15. No answer to this query.
16. I have not paid much attention to a systematic rotation of crops; but doubtless, very beneficial results would reward the agriculturist who did it.

Permit me to suggest another query, highly important to the interest of the rice planter, viz; The most eligible time of turning off the water, previous to the cutting of rice?

Opinions differ much on this subject, and it is a desideratum really worthy of investigation.

---

[*] The above were written in the year 1828, before Strong & Moody's Patent Rice Mill was invented, which was not until about the year 1833.

I will here add, good rice sells on an average for from 75 to 80 cents per bushel, though this year it will not exceed from 70 to 75 cents per average on account of the very large crops made this year.

A. Watson, Esq. one of the best planters in this State, concludes his answers to the foregoing queries, thus:

"I will now in a few words sum up the whole of the art, which, from my experience, is requisite:—fallow your land close in the winter; be industrious; attend strictly to the hoeing; pick it clean, and you may always expect a fair crop." He generally averaged 60 bushels to the acre. *Sou. Agt.*

Prior to the invention of Strong & Moody's Patent Rice Mill, rice was cleaned by the pestle and mortar, wrought by hand, or by water, steam or horse power. When cleaned by hand the rice in its rough or unhulled state is put into a mortar holding about a peck; the pestle is then applied by the hand until the grain is divested of its outer hull and inner cuticle, after which the flour and small rice may be separated from the large by fans and screens, or it may be winnowed. In this manner rice is sometimes prepared for family use, but never in this country for market. When rice is cleaned for market by pestle and mortar in all our rice-growing States, the following is the process, viz: It is first passed through what is called a sand screen, which removes most of the sand and trash from the rice. From that screen it goes through a pair of Liverpool millstones, so wide apart as only to remove the outer hull; as it comes from these it is carried by elevators to a fan which blows off the chaff, (which is the outer hull.) It passes from the fan into mortars, these mortars contain about four bushels each and are in number from 5 or 6 up to 22, seldom more, according to the work to be done and the power possessed where it is pounded with heavy pestles from one hour and a half to more than two hours, when it is removed from the mortars by hand into a place prepared for it, where it has to remain until the moisture which has been produced by the action of the pestle on the rice, is dried. Then it is carried up by elevators to what is called the rolling screen, which is about 16 feet long, having three different size meshes. Through the first size the flour passes, through the second, the small rice, through the third, the large or merchantable rice, and over the end of this screen, the head rice. From that screen, the small and merchantable rice goes into a brusher, so as to remove the flour from the grain. Under this brusher is a fan through which it passes. From this fan it is carried to the barrel, where it is well packed, and completely prepared for market. This mill was invented by a Mr. Lucas an Englishman, and has been in use for many years in our southern States, and has proved of great benefit

Strong & Moody's Patent Rice Mill was invented in the town of Northampton, Massachusetts, about the year 1833. It cleans the rice on an entire new principle from that of the pestle and mortar. This mill, after overcoming the various difficulties which the most of new inventions have to contend with, is now in successful operation in Charleston, South Carolina, and various other parts of the world. It is thought by many who are well able to judge, that it will ere long come into general use. This mill can use all the machinery that is used in a pestle mill, excepting the pestle and mortar. Rubbers are substituted for them, made in the form of millstones, from 18 inches to more than five feet in diameter; the smallest drove by hand, the larger by horse, steam, or water power. Through these the rice after it is hulled, is passed, and in its passage, is cleaned in the most perfect manner, is less broken than when pounded with heavy pestles, is cleaned much faster, is more free from grit, and keeps better than by any other mode of cleaning. The reasons for its keeping better in all climates, as it is found to do, (either on the sea or on the land) are caused by a greater degree of heat being produced by the rubbers; which is near 120 degrees in place of 65 or 70 degrees, which is believed to be produced by the pestle and mortar. This degree of heat produced by the rubbers, in a good measure kiln-dries the rice, and at the same times removes the dampness from the flour, so that it can be at once passed through the screen, brusher and fan into the barrel, when it is ready for market. In this process it is more perfectly divested of the flour, (on account of the flour being so well dried by the increased heat the rice receives from passing through the rubbers,) than by any other mode of cleaning. By this new mode of cleaning, the *eye of the grain* is much more effectually removed, which is another great reason of its keeping so well.

Very respectfully, your obedient servant,
Charleston, S. C. April, 1842. N.

For the American Agriculturist.

Orange County, its Fair, Stock, &c.

May, 1842.

Gent.—I beg to lay before you some items of information in relation to the fair and other matters in this county, and have to express my great surprise that no notice has yet appeared in the agricultural papers of the day, of our meetings here. A society was organized in September, but such was the apathy manifested by the farmers generally, and the number of members so few, that it was deemed most advisable not to hold a fair in 1841. However after a few meetings of the friends of agriculture good and true, and great exertions on their parts to enlist their friends in the good cause, it was determined that a Fair should be held on the 17th November. This was strongly opposed even by some warm friends of the society, they predicting that it would be a failure from the few that had already attached themselves to the society, the season being too far advanced, and the parties having stock, &c. to exhibit not having time to prepare it. Those who took but little interest in the matter and whose penurious dispositions would not allow them to contribute a dollar, (the price of membership) put on an incredulous smile and "guessed it would not amount to much." But judge, gentlemen, what was the pride and satisfaction of the few who planned and carried forward this matter, when I tell you that on reading over the list of members on the day of the Fair, that they numbered nearly 200. Some contributed five dollars. Such was the enthusiasm and good feeling that prevailed, that several successful competitors most generously presented their premiums to the society. This year we expect a large addition of members and a much better exhibition of stock. Come up to our next Fair and take a look at our good things. I will guarantee that we will show you some good butter, if nothing else.

The show of stock, considering the time of preparation was so short, was good.

Horses.—The first premium for stallions was awarded to P. H. Fowler, of Montgomery, for a young, compact well-made horse of good figure and action, a little deficient in size but a very useful horse. Horses have sadly degenerated in this county within the last 20 years, owing to there not being sufficient encouragement for the best horses to stand here.

Cows.—Your readers will be surprised to hear that the exhibition of cows, although much the greatest dairy county in the United States and its butter celebrated and known far and wide for its excellence, was meagre in the extreme; indeed there was but one approaching to any thing like a good one. This was shown by N. A. Deiderer, a breeder of some nerve and spirit, who exhibited other good things.

It is well known that dairy districts never were celebrated for breeding high-bred cattle of any sort, and experience seems to caution them not to dip too deep into the blood of the fashionable Durhams. The writer would consider that anything above half blood for the generality of farmers of this county would be of doubtful advantage. We know that the high-bred Durhams are suited only to those countries possessing a certain degree of natural or acquired fertility, such as we do not possess in this county: at least, the dairies are not pastured in many instances on lands of high fertility here. That the half bloods may be generally used to great advantage, I firmly believe. Some very successful experiments have been made by a few good farmers, which would seem to warrant the more general introduction of Short Horned bulls. I know of no better plan to improve the shapeless cows, and know of no man from whom they can be had, combining all the excellencies of that breed with such a large and valuable herd to choose from, as E. P. Prentice of Albany, certainly the Bates of America.

I am of the opinion of your A. B. A. that the produce from the best cows here got by a high bred Short Horned bull, would certainly answer all the purposes of the Ayrshire breed, if not excel them in most respects. You increase the size materially by the cross, and the milking qualities are apt to improve. By taking an animal of more symmetry, when no longer fitted for the dairy, it will be worth double the money the present race of scrubs are for fattening. These half breeds have not that delicacy of constitution that the thorough breds have. Experience which the writer relies on, proves that the high bred Durham (and the Herefords also) are not profitable for dairies either in this country or in England. For milkmen near cities they do better.

Sheep.—We had a few pens of sheep here that would not have disgraced any exhibition in the state. In this county reside some parties that have been very extensively engaged in importing all the improved kinds of stock. Sheep have especially attracted their attention, and it is to them that the society are indebted for showing some of the finest Cotswolds and South Downs. Although from the short notice there was not time "to get them up," yet they were in fair condition and showed what there is in breed. Much has lately been said of the cross between the South Down, and Merino or Saxon. I am opposed to such a cross and will give my views on this head as well as on the defects and excellencies of the South Down and other improved varieties of English sheep in my next. I cannot subscribe to the opinion that they are more exempt from the attacks of the hyatid than other breeds. They feed among John's-worth with impunity.

Of the Saxony or Merino we had only one or two sheep. This county could a few years ago boast of numerous and extensive flocks of these useful sheep. But owing to the low price of wool the farmers have got nearly rid of their flocks. It would be very alarming were it not for the fact that in the West and South West, where the soil and climate are better adapted for the animal and land cheaper, many are engaging in raising wool with complete success. It is an immense source of wealth to any country. Would that our prospects were better in this branch of agriculture and that the manufacturers were better protected. Farmers are too indifferent on this matter of protection.

Hogs.—The show of hogs was upon the whole decidedly bad. There were a few good ones. Captain Robinson of Newburgh had a white imported boar on the ground that attracted much notice, from his great length and size—his back was not good and lacked thickness. It was rumored at the fair that he was called another '*white*' Berkshire. It is hardly far enough West for 'white' Berkshires. The Brentnals of this county who were at the fair, and have some excellent hogs, but exhibited nothing, were, it is believed, the first to introduce Berkshires in the United States. They are not yet by any means common; indeed but very few have them in their purity. Those engaged in rearing them find a better market South and West, than to the neighboring farmers, some of whom are prejudiced against the breed and color. But if it is true, and no good breeder that understands his business will deny it, that those animals which improve the fastest are the most handsomely formed and the most beautiful to appearance, then I think the Berkshire claims our preference, as he is beyond all doubt or cavil, the most beautiful to appearance where he has been well bred. There was quite a show of farming implements, grain, roots, &c., for which premiums were awarded. A considerable number of the agricultural papers were very properly given in the place of small sums of money.

The committee experienced great inconvenience in selecting judges to act on the occasion, and have, at the suggestion of some of its members, determined to invite practical breeders living out of the county.

Yours, &c., S. W. jr.

THE KITCHEN GARDEN.

Parsnep.—This vegetable requires a deep, rich, mellow soil, free from stones and coarse gravel, A sandy loam is accounted the best. They may be raised from year to year on the same ground. As the seed is very light and vegetates slowly, it should be soaked or kept wet for several days before sowing. Let the ground be plowed or dug and worked deep, and well harrowed and raked over, so as to make a smooth, level surface. Sow the seed in drills, eighteen or twenty inches apart, and as early in the season as the ground can be prepared; the earlier the better, to insure a good crop. The seed may be covered an inch or more in depth.

As parsneps require the whole season to come to maturity, and are not fit for use till ripe, other seeds that come off early, may be sown with them, such as lettuce, radishes, and beets or carrots that are to be pulled early in the season, when the roots are small.

When the plants are two or three inches high, let them be thinned so as to stand from four to six inches apart. Hoe them and keep them clear of weeds till the leaves get so large as to cover the ground; after which they will need no further attention till you come to dig them. Some let them stand in the ground through the winter, and they are generally considered the better for it, provided they are dug as soon as the frost is out of the ground, for if they are left until they begin to sprout, their good qualities are much impaired. But if they are dug in the fall, they should be put into a cold cellar or out-house and covered with dirt or sand, as they are liable to wilt in a dry room if left uncovered. They ought to be dug carefully, without cutting or bruising, nor should the tops be cut close, nor the side roots be cut off; otherwise they are apt to rot or turn bitter where they are cut or bruised. If put into a warm cellar they are apt to sprout, which soon spoils them; but frost will not injure them at all, neither in the ground nor in the cellar, if covered with sand or earth.

Parsneps are often raised in fields to very good profit; for besides their uses in a family, they are excellent food for neat cattle, sheep, hogs or horses. Beef fatted on parsneps command a higher price in England than fatted in any other way. Milch cows fed on parsneps give richer milk, and yield more butter, than from any other food. Hogs are also said to fatten very easily on them, and to produce superior pork. All these things prove parsneps to be a very valuable crop, and well worth the farmer's attention.

Peas.—There are many varieties of peas; we however cultivate but four or five kinds. For the early kinds the soil should be strong and rich; and moderately rich for the later kinds. Fresh stable dung is considered injurious to peas. A sandy loam, enriched with decomposed vegetable matter will produce good peas.

Swamp muck spread upon the ground and plowed in, is a valuable manure. For early crops, more especially, the soil should be light; and a dry, warm soil is the most favorable. All peas raised in a garden, in order to produce a good crop, should be supported with branching sticks or brush. They should be sowed in drills, the smaller kinds two inches in depth, at least, and the larger kind still deeper, four inches, some say six inches is none too deep, as they take better hold of the soil, which in a light soil is a great advantage.

We commonly plant two rows, five or six inches apart, for one row of sticks The space between the rows of sticks must be regulated according to the size of the different kind of vines: for the *Early Frame*, *Early Petersburg* or *Early Washington*, about two and a half or three feet apart; the *Large Marrowfat* or *Green Mrrowfat* require at least four feet space. As the plants rise to three or four inches in height they should be well hoed and cleared of weeds, and the soil drawn up around them while the vines are dry: this should be continued as they rise higher. When from six to ten inches high the sticking should be done. Let the sticks be fixed firm in the earth, so as not to be blown down by hard winds. The sticks or brush, as to height, must be regulated according to the height of the peas.

Field culture.—The common method of raising field peas is to sow them broad-cast. In this case they should be sown much thicker than many farmers sow them, and be plowed in. There is very little danger of burying them too deep; it is said they will vegetate and come up if buried a foot deep. Peas sowed thin are very apt to fall down, and if the season be wet, they will rot on the ground; but if they are sowed thick, they will cling together and support each other, and yield much better by having more benefit of the sun and air.

Many people are much afflicted with buggy peas, especially in the old settlements. This is occasioned by a small brown bug that deposits its eggs or larva in the young pods. The only effectual remedy against this, that we know of, is to sow the peas late; so that they will not blossom till the period of depositing the larva is past. For this purpose they should not be sown before the 10th of June. We are informed that a respectable farmer in Rensselear county sowed his peas on the 10th of June, six years in succession, and never found a bug in them; while his neighbors who sowed earlier, had their peas filled with bugs. If your seed peas contain bugs, we would recommend to scald them by putting them into a tub or pail, and pouring in boiling water enough to cover them, and stirring them briskly about a minute; then pour off the water and add a little cold water to them and sow them soon. This will destroy the bugs without injuring the peas; and they will vegetate the sooner. But if your peas are buggy, your ground will require more seed; because when the chit of the pea is destroyed by the bug in it, the pea will not come up.

Peppers.*—As these require the whole season to come to maturity, they must be sowed early. Our method is to sow them in a hot-bed very early in the spring, and cover them with glazed sashes, when the weather is cold, to prevent injury by frost. They will be large enough to transplant in May, and may be transplanted in rows about two feet apart each way. Hoe them well and keep them clear of weeds; and if the soil is light and warm, they will come to maturity in good season. The squash pepper is reckoned the best for pickling.

Pepper Grass, or Curled Cress.—This will grow on any common soil; but a light, rich soil is the most favorable to it. It may be put in at any time from early in the spring to September. When it is up sufficiently large for salad, it may be cut up as it is wanted for use; but it soon becomes too large and tough, and therefore should be sown once in two or three weeks, in order to ensure a constant supply through the season.

Radish.—A light sandy, warm soil produces the best radishes. For the long tap-rooted kinds the ground should be plowed deep, and well worked over to make the soil mellow. They do not require a very strong soil; but if not sufficiently rich, it may be manured with swamp muck or other light vegetable mould. A little lime and strong ashes mixed with this manure, or strewed in the drills before sowing, will be highly beneficial in quickening the growth of the plants and destroying the worms, which in some soils nearly spoil the roots: for the more rapid the growth, the more tender and better is the root; and for this reason it is difficult to have good radishes very early in the season, without raising them in a hot-bed or in a very warm soil. Hence those raised in June or July, (if the season be not too dry,) generally grow the quickest, and if eaten when young, are the most tender and crisp; though they will do well in May, and even in September, if the weather be warm.

To ensure a constant supply of good radishes, they should be sown once a fortnight; for they are very unwholesome to eat after they become old and tough.

Saffron.—We generally sow this seed in double drills, about six inches apart, with a space of three feet between these double rows, for the convenience of passing and repassing to gather the flowers. They should stand from three to six inches apart in the drills, and be well looked to and kept clear of weeds while growing. When the flowers begin to appear they should be strictly attended to, and gathered into baskets once in two or three days, as long as they continue to blossom. These flowers may be spread on sheets, or on a clean floor to dry; and when sufficiently dried, may be packed away for use.

Sage.—This useful herb requires a good rich soil, and may be sown in drills, about two feet apart. When of sufficient size for culinary purposes, it may he thinned out as it is wanted.

---

* Droppings from the hen roost are the best manure for peppers.

The plants intended to be kept over the winter must finally be left at the distance of two feet each way. These may stand through the winter, covered with straw or other litter, or they may be taken up and put into the cellar. After the first year they will grow and bear seed a number of years in succession; but new seed should be sown once in three or four years, as young roots produce the most thrifty shoots. The leaves that are preserved for use, may be collected and dried, and packed away for future use. Botanists press them into hard packages and put them up in papers for market.

SALSIFY OR VEGETABLE OYSTER.—This vegetable, in appearance, resembles a small parsnep; it is raised annually from the seed, and may be cultivated in the same manner as parsneps or carrots, and is as easily raised.

It is a vegetable highly esteemed by those best acquainted with it.

There are various modes of dressing and cooking this vegetable. It is very excellent boiled and mashed up like squash or turnep, with a little salt and butter. Some make soup of it; in that case it should be mashed fine in order to thicken and increase the flavor of the soup. Others prefer it parboiled, and then sliced up and fried in batter, or without. A writer in the ***Massachusetts Agricultural Repository***, observes that "In its taste it so strongly resembles the oyster, that when sliced and fried in batter, it can hardly be distinguished from it;" and adds, "If your gardeners would introduce it into market, and our citizens once try it, there would be no danger of its ever failing hereafter to be raised. It is in eating from November to May precisely the period in which our vegetable market is most deficient in variety."

SUMMER SAVORY.—This plant will grow in almost any soil. It may be sown in drills about twelve or fourteen inches apart, so as to pass a hoe freely between the rows. Let it be kept clean from weeds, and if it comes up too thick, let it be gradually thinned out as it is wanted for use, and it will not require any further trouble. To dry it for winter use, it should be cut when in blossom, and spread on the floor of an upper room, or garret, where it can have air, and not be exposed to the sun. When it is sufficiently dry, tie it up in bunches and wrap it in paper, or put it away in clean bags for future use.

SPINACH OR SPINAGE.—The round leaf spinage, which is the only kind we raise, may be sown in April. It requires but little space in a family garden; one row of a suitable length, on the border of a garden, or beside the alley will suffice; but the value of the plant for greens depends much on the richness of the soil. It requires some attention while young to keep it clean from weeds; and if the weather be dry it will need frequent watering.

SQUASH.—Squashes require to be treated much after the manner of melons and cucumbers. The *Lima Cocoanut*, or *Valparaiso squash*, as called by some, should be planted early, on a rich, warm soil, as it requires the whole season to come to maturity. This and the *Winter Crook-neck*, as they produce running vines, require to be planted in hills at the distance of six or eight feet, but before they begin to run, the weakest plants should be taken out, leaving not more than two in a hill. The *Summer Crook-neck* and the *Summer Scollop*, being what are called *bush squashes*, as they have no running vines, may be planted in hills about four feet apart, each way. These must be cooked while young and the skin tender, as they are unfit for the table after they begin to be hard. The *Summer Crook-neck* is esteemed as the richest and best summer squash we cultivate; but it is not so productive as the *Summer Scollop*. The *Lima Cocoanut*, when baked in the oven, is considered by some equal to the *Carolina Potatoe*, to which it bears a near resemblance.

TOMATO.—This plant while growing has somewhat the appearance of a hill of potatoes growing in the garden. It is a South American plant, and bears its fruit on the branches, much resembling the squash pepper. We shall notice but two kinds, the large and small, of which there is no material difference, except in the size, and the ripening of the smaller kind a little sooner; but the larger kind is generally preferred for common use.

To obtain early fruit, the seed should be sown in a hot-bed or in boxes of light, loose earth, about the middle of March. The bed or boxes should be exposed to the rays of the sun as much as possible, and be secured from the frost, and have a sprinkling of water when the earth appears dry. The plants may be carefully removed into the open ground as soon as the season will permit. They may be set in a row along the border of the garden, allowing three feet distance between the plants, and be supported by a fence or trellis; or they may be planted in rows at four feet distance each way; but in this case, care must be taken to keep the branches from the ground, which may easily be done by setting small crotches on each side of the rows and laying small poles on them. This will preserve the goodness and increase the quantity of the fruit.

Tomatoes may also be brought to perfection by sowing the seed in a warm, light soil, about the first week in May; and if the situation be favorable, with good management, the product will be abundant.

There are but few who relish the tomato at the first taste; and few who are not extremely fond of it when properly cooked and they become accustomed to it. It is considered by physicians and others acquainted with its effects, not only a very delicious, but a very wholesome vegetable; indeed some will give a decided preference to a dish of *tomato sauce* or a tomato pie, when properly prepared, to any thing of the kind in the vegetable kingdom. There is no vegetable more easily raised, and none better pay the cultivator where they are generally known. They are used in various ways, either raw, with sugar, or stewed for sauce, or in fricasses and soups; for catsup or gravy, for meat and for pies or preserves, as well as for pickles and sweet-meats.

For the information of those not acquainted with the *tomato*, who may wish to try the experiment, we give the following directions for preparing and cooking them. Take them when ripe and red, dip them into scalding water, and take off all the skin, cut them in quarters and scrape out the seeds; then put them into a clean stew-pan and let them simmer about fifteen minutes, then put in a little butter and pepper, stir them a few minutes and they are done. Some prefer adding some crumbs of wheat bread or grated crackers. For pies or preserves the tomato requires a little more sugar than the peach to make it equally palatable. The process of making is much the same as with other fruit. Tomatoes may be preserved fresh by covering them with sugar. The green fruit is often pickled, like the cucumber or pepper. When prepared according to the following directions they make an excellent sauce or gravy for meat or fish.

To make Tomato Catsup.—Collect the fruit when fully ripe, before any frosts appear, squeeze or bruise them well, and boil them slowly for half an hour, then strain them through a cloth, and put in salt, pepper and spices to suit the taste, then boil again and take off the scum that rises, so as to leave the liquor in its pure state; keep it boiling slowly until about one-third of the juice is diminished, then let it cool and put it into clear glass bottles, corked tight and kept in a cool place for use. After standing awhile, should any sediment appear in the bottles, the liquor should be poured off into other bottles, and again corked tight.

Turnep.—The *early flat turnep* may be sown for early use in March or April—also in May and June for summer use, as those sown early become rather tough and stringy, and run up to seed in the latter part of the season. They may be sown broad-cast or in drills, fifteen or sixteen inches apart, and thinned out to three or four inches distant in the rows; and if the soil is good, light and mellow, they will thrive well, and afford a healthy and nourishing variety to other summer vegetables. The *Flat Field* turnep is the most suitable for fall and winter use, and should not be sown till the last of July or first of August, or still later; many prefer the 10th of August. In a favorable season they will do well if sown the last of August or first of September; they have indeed been found to be much sweeter and better in the southern part of this State than those sown earlier. But with us it is not safe to sow so late, as the cold season may set in early, and stop their growth.

Newly cleared land is found to be the best for these, as it generally produces the largest and sweetest turneps, and they are less exposed to the depredations of insects. A sandy or gravelly loam is reckoned the most favorable soil, and they will generally do well if sown on a green sward that has been turned up to a good depth the preceding spring, and yarded with cattle or sheep, with repeated harrowing during the time, in order to mix the manure with the soil. Before sowing, plow the ground again, make it smooth and level with harrowing, and at a time when the ground is sufficiently moistened with rain, sow your seed broad-cast or in drills, as you choose; but care should be taken not to sow too thick, and even then they will doubtless require a considerable thinning. If sown broad-cast, it will require more labor to thin them out and keep them clear from weeds, though the first labor will not be so much as sowing in drills. They should be thinned to the distance of six or eight inches.

Turneps are often injured by the ravages of a small black fly, which in the quickness of its motions very much resembles a flea. Against this there are various preventives recommended. There is perhaps none better than that mentioned by *Abercrombie*, which is, to soak the seed in sulphur water, at the rate of an ounce of sulphur to a pint of water, which will be sufficient for soaking three pounds of seed.—Some recommend sowing ashes or lime over the ground after the seed has come up. This will generally have a good effect if sowed when the dew is on.

If boiled in water with corned or salted meat, (which is a common practice in many families,) they should not be peeled at all. Turneps raised in a suitable soil, will be fair and smooth, and of a sweet flavor, and when first pulled, will wash white and clean without peeling. After being gathered and stowed away in the cellar awhile, the dirt adheres to them; they may then be put into a pail of warm water, so as to moisten the skin, and scraped with a knife, and washed clean, fit for the pot, without the least necessity of peeling. A turnep is surrounded with a coat or skin under the scarf skin, which in a common sized turnep is nearly of the thickness of an orange peel. This skin, in peeling, is often cut through, by which the turnep, in boiling, becomes completely water-soaked, and the sweetness is boiled out; it is then unfit for the table. A better way of cooking turneps or potatoes is to steam them instead of boiling them in water.

But good sweet turneps, raised in a suitable soil, having no rank taste in them, are much better cooked by cutting them into small pieces and stewing them. While stewing, mash them up in the kettle, and when sufficiently done, take them up and dress them with a little salt and butter.

Murrain in Cattle.—To many persons it will no doubt seem strange, to consider the origin the two disorders, so very different in their appearance, symptoms, and effects, as the botts and murrain, as arising from the same cause—namely, indigestion; but, as I conceive that they are engendered by a disordered state of the stomach, caused by sour and unwholesome food, and that they might both be cured, or which is better, be *prevented*, by timely administration of a medicine, alkaline in its nature, I believe that reason will bear me out in the conclusion to which I am partly led by perusing an article on this subject in the Cabinet, where it is said, (quoting from the American Farmer,) "Some years since I purchased a horse, but he had the appearance of laboring under disease. I commenced a course of treatment which I had before pursued in cases similar to appearance, but without effect. I was therefore induced to try the use of *lime*, as I was confident he was filled with botts, for he had discharged several. I therefore commenced by giving him a table-spoonful of slaked lime three times a week in bran mashes. After pursuing this course near two weeks, the botts began to pass away in quantities, varying from ten to twenty, which he would expel from his intestines during the night. In the mean time his appetite began to improve, and in six weeks he was one of the finest geldings I ever saw. From that day to this I have kept up the use of lime among my horses, with decided benefit; and, as an evidence of its good effects, I have not lost a horse since I began to use it. And lime is a certain preventive in keeping cattle from taking the murrain. As an evidence of this fact, I have used it among my cattle three times a week, mixed with salt, for three or four years; and in that time I have not lost a single animal by this disease; but, in the mean time, some of my neighbors have lost nearly all the cattle they owned. But I will give a stronger case than even the one above mentioned. One of my neighbors who lost his cattle, had a friend living within two hundred yards of him, who had several cattle which ran daily with those that died, and his cattle all escaped. He informed me that he made it an invariable to give his cattle salt and lime *every morning*. I have, therefore, no doubt but salt and lime are a sure and infallible remedy for botts in horses and murrain in cattle."

And I am reminded of a circumstance by a friend, who has often before mentioned it. He had two fields of pasture near his house. On one of these he spread lime upon the turf to the amount of more than 200 bushels per acre; but, as the other field lay immediately below his cattle-yard, from whence he had formed drains to carry the water over its surface in the most complete manner, he determined to let that suffice for a dressing; and the effect of the highly impregnated water from the yard was a growth of grass truly astonishing. Both fields were kept in pasture, and when the stock had eaten one of them down, they were removed to the other, and so changed regularly about. But the effect of the different crops on the appearance of the stock, horses and cattle, is not to be expressed; for while feeding on the limed land their coats were close, shining, and healthy, and their spirits light and cheerful, even when they were obliged to labor hard to obtain a belly-full; but when turned into the watered grass, six inches or more in height, a difference for the worse could be perceived in twenty-four hours, and every day after they lost condition amidst the greatest abundance, with coats rough and staring, lax in the bowels and flaccid, with distended paunches, dejected countenances, and sluggish in their movements. But the transition to health and vigor and good looks was quite as sudden and apparent on a return to the limed land. My friend adds, he never had an instance of the murrain or botts, while his stock fed on these pastures, but is satisfied he should have had both, but for the change to the limed land.

In conclusion, I would ask, is it not fair to draw the following deduction from what has been said, namely, that all dairy pastures ought to be heavily limed; it being the most natural thing in the world to suppose that a proper secretion of milk, the best and most wholesome, depends very much on the nature of the food with which the animals are fed? Ergo, lime your pastures, and allow your stock as much salt as they will consume daily, for I am convinced that lime and salt are a remedy for "botts in horses," as well as the "murrain in cattle."—*Far. Cab.*

Manures.—According to Leibig, the evacuations of an adult, liquid and solid, will annually yield 547 lbs. or one and a half pound per day. This is sufficient to manure fully one acre of wheat or other grain. But even in the modes of preserving and using it, by the aid of lime, much of its ammonia is wasted; and it has been shown, that to the ammonia the wheat owes its nitrogen, the element on which we have most to depend for improvement, both in quality and quantity. Lime should no more be mixed with night soil, than with gas liquor; on the contrary, the matters added to absorb the liquid, should have an acid tendency. Gypsum does very well by double decomposition. Peat earth is acidulous enough to fix the ammonia, where at hand; but in large towns, this earth often requires pretty distant carriage. Refuse bark is, however, generally produced in populous places, and is an incumbrance to the tanner, from which he is obliged to contrive various methods for relieving himself; amongst the rest burning, to the great annoyance and suffering of the neighborhood.

But tanners' refuse bark has also enough acidulous quality to fix the ammonia in night soil; and being so generally at hand in populous towns, may be employed for the purpose extensively.

Three parts of tanners' bark to one of night-soil (urine included, which is as valuable as any part,) will make a stronger manure than stable-dung; and with this further advantage, that the stable-dung requires to be rotted, to reduce the long straws, and kill the undigested seeds it contains; whilst the bark being already short, and the night-soil containing no seeds, it may be carted to the field at once; thus saving the heavy waste in rotting.

In the tan-yard, the bark may be stercorised, by having a privy or two, and suitable corners for the workpeople, all made to drain upon the heap; calculating say one pound of evacuations liquid and solid from each individual, per day, and proportioning the bark to it; what is above that quantity being disposed of to other persons, for the same purpose. All the hide wool and glue washings and house drainings should run into the same, which should be roofed over, to keep off the rain, but with open sides to encourage evaporation of the moisture. All the ashes of fires, whether of the works or house, should be added, to help the absorption, and destroy the smell; and by this means a tanner employing twenty-five hands may turn out twenty-five pounds evacuations; add three times the quantity of tanners' bark seventy-five pounds; add for ashes, &c. above detailed, and we have one hundred and fifty pounds of manure per day, richer than stable-dung, much better for wheat, and losing nothing in rotting as not required. In other places, as private gardens, school grounds, &c., the bark may be procured from the tanner, and added to the privy sink, in rather larger proportions, reckoning the evacuations as one and a half pounds per entire day of twenty-four hours. Much less bark will do, say half as much as the night-soil, making up the quantity with garden mould; but the bark is so much additional vegetable matter, at little cost. It may be thrown in, a load at a time, for the excrement to fall upon; but the ashes should be added daily, so as to lie on the top, and absorb the smell. A long and large trunk should rise from the sink, to encourage evaporation and carry up, also, the smell still remaining; for although much subdued by ashes, it cannot be altogether destroyed, without careful mixture not practicable for such a purpose. In this manner large quantities may be collected.

Peat earth will do instead of bark, as above stated, with the precaution not to throw it in in cohesive lumps, which will not absorb, but as dry and crumbly as possible. The ashes are equally useful in either case.—*Eng. paper.*

Diseases and Treatment of Cattle *imported into the South; by Col. W. Hampton.* All cattle imported from England, the north and west, are very liable to be attacked with a fatal disease, which I take to be an inflammation of the brain.

Young cattle, from eight months to one year old, are less subject to it than those more advanced in life. If they survive the summer and autumn, I consider them safe, although great care should be taken of them the second season. They should be brought into the state as early in the fall as possible, kept in good growing condition through the winter, and in the spring be removed to a high healthy position, have easy access to pure water, and their pasture as much shaded as the nature of the ground will admit. In August and September, they should be kept in a cool stable during the heat of the day, and at night also, the dew at that season being almost as injurious as the intense heat of the sun.

With these precautions, I think more than half would escape the disease, the first indication of which is usually a languid appearance of the animal, followed by the loss of appetite, short, quick breathing, with more or less fever, and not unfrequently accompanied by a cough.

I have hitherto considered this disease, when once established, incurable. I have recently learned, however, that by sawing off the horns, close to the head, nine out of ten would recover. In two cases only have I known the remedy to be tried, and in both the experiment proved successful.

Horn-ail, *by Joseph Feihrer.*—As this disease is of an inflammatory character, the application of spirits of turpentine and the like, which *produce* inflammation, is entirely wrong.

When the animal is observed to be suffering from this disorder, one or two quarts of blood, according to the size of the animal, are to be drawn immediately from a neck vein. Then two table-spoonfuls of the following powder are to be given three times every day, the powder being previously dissolved in a pint of lukewarm water; this to be continued until the animal recovers: Glauber salts, six ounces; cream of tartar, two ounces; purified saltpetre, two ounces; powdered root of althæ, one ounce and a half.

It is necessary besides, to rub the animal frequently during the disease, principally on the back. But if the animal should be costive, either of the following clysters is to be given:

Take a handful of chamomile flowers, two handsful of flax-seed; boil them in two quarts of water, strain them, and add eight ounces of linseed oil, and three table-spoonsful of common salt. This clyster is to be applied by means of a syringe.

Should these articles not be at hand, take one quart of wheat bran, pour two quarts of boiling water on it, strain, and add eight ounces of flaxseed oil and two ounces of common salt. This clyster is to be lukewarm when applied to the rectum or straight gut, by the means of a syringe or a fit funnel.—*Far. Cab.*

Raising Potatoes by the use of Lime. The only two cases in which potatoes were not a failure here, were where lime had been extensively used. It is supposed it retained the moisture besides serving other useful purposes to the crop in question. The two farmers who used it had each a thousand bushels of potatoes, where their neighbors with as good prospects, except the lime, had only five hundred bushels each.

The kind of soil to which the lime was applied is not mentioned, but according to our recollection a considerable part of the land in this district has a dry deep soil of the color of a pale brick, with a slight mixture of gravel, but with neither rock, solid clay, or hard pan of any kind near the surface.

It is certainly the case that potatoes manured with a mixture of stable manure, and of kelp or rockweed which had begun to putrefy, will withstand a drought which considerably diminishes the crop manured with nothing but stable dung.—*Colo. Far.*

Large Hog.—Mr. Jameson, of Cornish, Me., March 24, 1842, killed a pig 22 months and 12 days old which weighed alive 1010 pounds. Dressed he weighed 905 lbs—without the caul, that weighed thirty-eight and a half pounds. Making his whole weight 943 1-2 pounds—a loss of only 66 1-2 pounds. He was a cross of the Berkshire on other breeds—girted seven feet, and was five feet and about ten inches in length. His keeping till September last, was not high or expensive. Six bushels of potatoes and two of meal, with weeds and the spare milk of three cows, lasted him and two breeding sows of the same age, two weeks. The potatoes were boiled, mashed up in a large tub, the meal added and water enough put in to make it quite thin. In addition to this feed night and morning since September, he has also three quarts of corn at noon.—*Gen. Far.*

New Variety of Rice.—A French resident at Jehat in Mongolia, has lately sent to Europe a variety of rice which is supposed, will prove a great acquirement to southern latitudes. Rice usually requires a moist soil and irrigation. The specimen from Mongolia grows in a dry soil and is cultivated like our common grains.—[Eds. Am. Agt.

Preserving Eggs.—One bushel of quick-lime, thirty-two ounces of salt, eight ounces of cream of tartar. Mix the whole together, with as much water as will reduce the composition to such a consistency that an egg, when put into it, will swim."—*Eng. paper.*

To wash Black Worsted or Woollen Hose.—If new, soak all night; then wash in hot suds with beef's gall, a tablespoonful to half a pail of water. Rinse till no color comes out. Then stretch on stocking frames, or iron them when damp on the wrong side.

ADVERTISEMENTS.

THE FAST TROTTING
HORSE BELLFOUNDER.

Will stand at Middletown, Butler Co., Ohio, this year at $8 for the season. He is a bright blood bay, with black legs, mane and tail; is 16 hands high, and weighs 1200 lbs. He has proved himself a first rate stock horse, some of his colts having sold near N. York for $1000. He has trotted his mile in 2 min. 45 sec., and is every way a sound and desirable horse, his colts being equally adapted to the road and heavy farm work. Address Dr. ANDREW CAMPBELL as above.

R. H. HENDRICKSON,
MIDDLETOWN, BUTLER COUNTY, OHIO,

Is now prepared to fill orders for thorough-bred Berkshire Pigs, from the late imported boars Windsor Castle, Earl Craven and Sultan, and twenty choice sows purchased of A. B. Allen, a part of his recent importation. Pigs in pairs from this superior stock will be furnished substantially caged and delivered on the canal at Middletown, or on board steamboat at Cincinnati, from $30 to $50 according to age and quality. Orders accompanied with cash, will always secure the preference.

ALSO—Pigs bred from the superb boar Kenilworth, of a stock of the largest and finest kinds of white hogs in England, also imported by Mr. Allen last October, crossed on the splendid large white Miami hogs of this country. The Miamis have been long noted for their large sizes. Animals of this breed have occasionally come up to the enormous weights of 1200 and 1400 lbs, and it is believed that the cross of Kenilworth on them, will easily attain the weights of 700 to 1000 lbs at 18 months and two years old, if well fatted. Pigs of this cross $25 per pair caged and delivered as above.—Refer to the editors of this paper.

M. L. SULLIVANT, of COLUMBUS, Ohio, has for sale Short Horn Cattle, Mules, Leicester Sheep, and Berkshire Pigs.

ERICAN AGRICULTURIST.

Agriculture is the most healthy, the most useful, and the most noble employment of Man.--*Washington.*

Vol. I. **New-York, July, 1842.** **No. 4.**

A. B. Allen, and R. L. Allen, Editors. Geo. A. Peters, Publisher, 36 Park-Row.

"THE AMERICAN AGRICULTURIST" will be published Monthly, each number to contain thirty two pages, royal octavo.

Terms.--One Dollar per annum payable strictly in advance.

Six Copies will be sent for $5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside.

Twenty five Copies will be sent for $20, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, No. 36, Park-Row, New-York.

☞**Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

The Improvement of Sandy Soils.

In considering the manner of renovating exhausted lands, or such as are naturally sterile, there is always a preliminary inquiry to be made by the prudent farmer, as to the profit or loss of the proposed project. In China, and other portions of the East, and in Flanders, and other parts of Europe, this question is never asked. If the *foundation* can be had to work upon, this suffices to determine the undertaking. Their industry, skill, and perseverance are at once put in requisition to accomplish the object, and in this they never fail. No matter how unpropitious or forbidding the prospect. If, as in Holland, the earth demanded for man's subsistence, is several feet below the surface of the ocean, a dyke of sufficient strength is made to secure and hedge it in from the watery waste; ditches are made through it wherever required; a pump worked by a windmill or other power, hrows out the surplus water that cannot be disposed of by draining; other earths are added, if essential, to temper the reclaimed ground; manures, both vegetable and mineral, are applied; and finally, seeds carefully selected are planted, and the result, the *necessary* result, is that a kind Providence smiles on these persevering efforts, and bountiful crops richly reward the labours of the husbandman. If, as in Belgium, they have an arid sand alone to commence with, they pursue a system of trenching, to which they add all the manures within their reach, and roots and clovers follow in rotation, with occasional other crops, thus completing the reclamation of the sandy heath. If, as in Ireland, Scotland, and some portions of England, a marsh of peat, repellent of all vegetation, save the cold and water-loving lichens; the mass is effectually drained of its antiseptic moisture, which prevents all vegetable decomposition, without which, a re-organization of vegetables in new varieties and other forms, cannot be accomplished, the earth is broken up and exposed to the influence of the elements, and soon by the addition of other earth, destitute, perhaps, of fertility in itself, the whole surface is at once brought into perfect and lasting subjection. In Egypt, where the naked sands have been driven by the blasting sirocco since the days of the Pharaohs, whenever the whim or policy of the reigning Pasha dictates the cultivation of any portion of this drifting mass, irrigation and the addition of manures and a portion of other soils, instantaneously produces a change equal to the wand of their own magicians. The transformation is as sudden as it is wonderful and enchanting. Where but a few months before not a blade of grass, or a single shrub had disturbed the solitary waste for thousands of years, extended plats of luxuriant grass rise up in delightful contrast with the surround ing barreness; hedges of flowers of every variety and hue greet the eye and perfume the air; while groves of orange and citrons, of dates and pomegranates, minister gratification to every sense.

Such results from the most extreme cases, show the practicability of converting every portion of the earth's surface into prolific fields. Where population is dense, as in the countries above alluded to, *necessity* compels the adoption of such a course. Famine in many instances offers them the only alternative. Self-preservation, the most powerful stimulant that can influence human action, is the controlling motive; and when we see results so astonishing and so gratifying, we are compelled to deduct a portion of the admiration, we should otherwise feel for the architects, and ascribe to necessity, what we should prefer to attribute to an enlightened taste.

The circumstances of our country, are happily, however, widely different. We are not driven to the adoption of any system from the apprehension of want. The question with us is one of pecuniary consideration, or the indulgence of a judicious taste; and as this last is necessarily confined to the few, we must limit our inquiry for the present, exclusively to the former.

The first question for the farmer or planter then is, *will it pay*, to reclaim my worn out fields and restore them again to their former fertility? An earlier and more appropriate inquiry should have been made, when he first commenced the cultivation of his land, which is more easily and satisfactorily answered, *shall I maintain my land in its present condition of fertility?* There is a wide difference between supporting the character of a soil already capable of producing a large growth of vegetables, which are occasionally added by entire crops to the land, to sustain its fertility, or it may be to enhance its productiveness, and the slower process of accumulating a soil through years of careful toil, where sterility already exists. The first may be done at the same time that the husbandman is abundantly rewarded for his labour; the last requires, perhaps years of delay, before he is sufficiently renumerated for his exertions. Yet this inquiry must be answered fairly and fully, and after a thorough examination of the whole circumstances of the case.

There are three cogent reasons against reclaiming sterile lands in our country, viz. the great abundance of new, cheap lands; the low price of agricultural products; and the high price of labor. There are on the other hand some equally strong reasons to counteract these. The two that generally exist, are proximity to one's own land already under cultivation, and this motive is greatly enhanced, if it belongs to the estate, as it generally does; and such lands generally have the advantage of being near to market, or afford facilities of intercourse to them by roads or otherwise. There may also occasionally be other advantages which are from their weight and consequence, fully entitled to determine the question in favor of the project of reclaiming. Such are the existence in the vicinity, of mineral, or accumulated stores of vegetable manures. If for instance, there are deposites of mud, or clay, or lime, or peat, or swamp muck, near by, which may be conveyed to the land at not too great an expense; or if contiguousness to the sea, afford any of the marine sources of fertilization, such as sea-weed, which is charged with salts and vegetable matter, and especially if fish can be procured in quantities, to impart sufficiently their fertilizing properties to the light soils of the Atlantic coast; or if facility for irrigation exist; if one or more of these resources can be had for imparting fertility to exhausted land, the plan to be pursued is plain and easy. The addition of either will generally afford such a measure of productiveness, that the subsequent vegetable growth can yield all the addition that may be necessary for an eminently fertile soil. If these are wanting, the process is a slower one, though with care and attention, if the farmer can afford it, not the less certain.

It would afford the surest clue to the best method of improving a soil, to ascertain, if possible, in what elements essential to vegetable production, if any there are, it is deficient. The strictest analysis has shown that several inorganic substances are necessary to the perfect growth and maturity of every plant. These exist in the ash of vegetables, and are fixed and immovable, and drawn for all practical purposes, *exclusively* from the earth where the plant grows. Soda may, it is true, be often carried by the ocean blasts, to a greater or less distance and in larger or smaller quantities, according to their strength, and sometimes deposites from this source are found far inland. Occasionally other fixed matters may be temporarily suspended in the air, which are subsequently deposited on the earth, but not in sufficient quantities to afford an appreciable supply to growing vegetation.

The inorganic substances required for wheat, are potash, soda, lime, magnesia, alumina, silica, iron, sulphure, phosphorus and chlorine. In addition to the above, barley contains manganese; and many vegetables contain iodine; this with chlorine and soda being furnished in sea water, and the two last are the exclusive ingredients of salt. All the grains, clover, grasses, turnips and other roots, and all other plants, require most of the above substances in greater or less proportion. *These are indispensable to the perfect development of the vegetable.* If any soil is deficient in one or more of them, it cannot mature the crops requiring them, and though perhaps they are never entirely wanting, yet if they are absent in sufficient quantities for the use of the different vegetables required, they are classed as barren. The spontaneous growth of certain trees and shrubs is a surer test of the existence or deficiency of inorganic materials adequate to the support of profitable vegetation, than even the alembic of the chemist. It is shown for instance that the dried wood of Poplar, Elm, Hickory and Maple, contain a proportion of ashes, greatly exceeding those of the Birch, Pine and several species of the dwarf or scrub Oak. Now what are we to infer from this, but that Poplar, Elm, Hickory and hard Maple, when spontaneously existing in great perfection, indicate in the soil, an abundance of the alkalies, and other inorganic matters existing in ashes? or in other words that the existence of these trees show a good soil? And what are we to infer from the profusion of Willows, Beech, Birch, Pine and dwarf Oak, but that the soil is deficient in Alkalies? Universal experience confirms these deductions of science.

To understand then, precisely what is necessary to the renovation of exhausted sandy soils, it is first requisite to ascertain their general deficiencies. These are both mechanical and chemical. They are totally destitute of that compactness and adhesiveness, essential firmly to secure the roots of vegetables; and incapable from the want of intimate contact, of conveying to them the liquid nutriment, necessary to their growth. They are leechy; allowing the rains that fall upon them to evaporate speedily, or sink far beneath the surface beyond the reach of the thirsty roots. They are equally wasteful of manures added to them, yielding their rich gases at the first demand that is made, whether it be from the dissolving rains, or the exhausting heat, and this renders it necessary when cultivated in any crops excepting grass, that manure should be applied only just before it is required to put in the seed, and from the great facility with which its parts with it, they not unfrequently afford a large first crop.

They possess a white, glazed surface, which, in the last number of our paper on the subject of "hoeing crops," we showed, is unfavorable to absorbing the heat from the sun's rays, and conveying the desired warmth to stimulate the absorbent vessels beneath the surface; and equally incapable of a rapid evaporation of heat, when the influence of the sun is withdrawn, thereby failing to condense a copiou dew.

But they are also essentially deficient in combining those ingredients in sufficient quantities, which we have shown above, to be requisite to the perfection of vegetable life. They are made up almost entirely of disintegrated quartz, which consists of 93 to 94 per cent of silica, thus allowing but a small proportion of all the other ingredients demanded for successful cultivation.

Here then we have the deficiencies of a sandy soil, and these being known, the remedies are obvious. It sometimes occurs that a *clay subsoil* exists under the sandy super-soil. When this is the case, nothing is more obvious, than to bring up by deep ploughing, the clay from beneath, to mix with the sand. If this is not within the reach of a sub-soil plough, the addition of *clay* from adjoining fields is the very best application that can be made. This should be scattered over the field, pulverised and harrowed upon the surface if in grass; or if in tillage, lightly plowed in after thorough harrowing. *Lime* also should be added in quantities proportioned to the amount of vegetable matter in the ground; 10 to 100 bushels per acre according to circumstances; also *clay marls*, containing 5 to 20 per cent of lime; or *calcareous clays*, containing over 20 per cent of lime, or even other calcareous soils, if such as contain a large proportion of clay cannot be obtained. *Muck* from swamps; and especially *peat*, if it can be got, which of course is not to be found far south; after draining and exposure to the air, and thoroughly mixed with animal manures and ashes, are potent agents in the renovation of sandy soils; and there is no application after clay more beneficial than *ashes*, either fresh or leached. They contain generally all the inorganic substances required for the most successful cropping, and in a light soil are unsurpassed by any other manures. *Gypsum*, which is available almost every where in the United States at a moderate price, is a valuable application, at the rate of 100 to 400 lbs. per acre. Barn-yard and animal *manures* of every description cannot be better applied than by adding to any of the above. In addition, *sea-weed* which is rich in powerful salts, and *fish* if they can be had in large quantities, may be spread over the ground and ploughed in, which will make an immediate return in large crops, though they seldom last beyond a single season in very light lands. *Bones* of every description ground or crushed, and *hair and horn* shavings are peculiarly adapted to the objects in view. Charcoal finely pulverised applied in moderate quantity on the surface has been proved to be a most valuable manure. It is rough, porous and black;

consequently, is precisely adapted to correct the mechanical deficiencies of sand. Like lime and alumina, it has the power of condensing ammonia from the atmosphere which it retains in its pores, till demanded by the catalytic power of the growing plants. This is an operation which the farmer should of all others endeavor most to promote, and if he can but keep his soil in the condition in which it will appropriate the fertilising properties abounding in air and dews, he will add fertility to his products, without the expense of furnishing too large a portion of this food in solid manures. In addition, a top dressing of *common salt*, *nitrate of potash*, (*saltpetre*) and dry *sulphate of soda*,[*] and various other more expensive articles may be used, if they can be afforded. If lands can have the benefit of irrigation from a constant stream, the effect (in connexion with some of the above,) will be instantaneously perceived, and especially if charged with some of the fertilising salts as they frequently are; or indeed in such cases, they perhaps will come filled with all the necessary ingredients for producing a high state of fertility.

With one or more of these ingredients to begin with, a proper system of cultivation should at once be commenced and rigidly followed out. If the applications made are not sufficient to ensure permanent fertility, which they cannot be unless by irrigation with the right material; or it be not economy to add other manures in preference; *enriching crops* should be sown, and when nearly or quite matured, should be turned in, to be succeeded by others at proper intervals, so as fully to maintain, or what is better, to increase the capability of the soil. For this purpose, *any vegetation* will not come amiss; but the most suitable are *clover*, *buckwheat*, *rye*, *oats*; and if these are fed upon the ground, nearly all their benefit will be yielded to the land, at the same time that they have afforded no inconsiderable support to the stock of the farm. All manures should be carefully husbanded and applied; all the *stock* that can be sustained on the premises should be kept, and especially sheep; and the *roller*[†] should always be used to give as much firmness and compactness to the surface as possible.

A proper *rotation* is essential to successfu cultivation of light soils, unless it be required to keep them in meadows, in which condition they are soon liable to become foul, and this always require a thorough breaking up again. The rotation may vary with the variety of crops required. We shall give hereafter such as are adapted to the different latitudes of this country; and with such as are suited to the location, thoroughly carried out, and the products consumed on the soil, or returned to it in the manures afforded in their consumption, or, an equivalent for them if the crops are taken from the farm, the soil will be constantly improving. The *salts*, and the proper composition of the soils, are the first things to be acquired. These once in operation the crops will draw largely from the atmosphere and the rains and dews, the organic materials required, and carbon, oxygen, nitrogen, and hydrogen will be rapidly accumulated to fill up the vegetable skeleton, with the flesh and fibre and fluids. These if again given to the soil with the consumed products, afford increased fertility and like interest compounded, will greatly enhance the future profits of the diligent and skilful farmer. We would recommend a series of experiments on a small scale, to be tried by each farmer for himself, with such materials as if found successful may be profitably applied. These are his only sure guides. ***Principles*** he can get from books, their *application* and *adaptation*, can only be made by himself, and as soil varies through every successive acre over the face of the globe, the salts or mineral manures most perfectly adapted to any given field, can be known only to the cultivator himself. But we have occupied so much room on this subject already, we must forego any further observations at present, but will refer those desirous of additional information to the various items bearing on this matter, that will appear from time to time hereafter.

R

Tour on the Mississippi.

We were never so strongly impressed with the mighty resources of our country, as we have been since floating down the Mississippi, and stopping occasionally, and making excursions into the interior. It is a land, the resources of which, in an agricultural point of view, can be hardly overrated, and with our present careless mode of cultivation, this valley, embracing as we do in the appellation, all west of the Alleganies, is capable of supplying a population of at least one hundred millions of people. Taking the whole of the Mississippi into consideration, it is grander than any river in America, and we might add with perfect truth, in the whole world; still it has nothing upon it approaching the wild mountain scenery of the Hudson, nor the clearness and purity of water, general width, or beauty and variety of shore and islands of the St Lawrence.

---

[*] Glauber salts is precisely the same chemical composition as dry sulphate of soda, with the exception, that the former has an addition of rather more than half its entire weight of water, (55 or 56 per cent.) which gives to it the crystalline form. The dry sulphate of soda can be purchased in New-York for about one cent a pound, and at this price, we have no doubt, in the neighborhood of vegetable markets, it would affort a most judicious and remunerating top dressing. It should be applied in May or early in June.

[†] Hon. Wm. Clark, of Northampton, Mass., has recently sent us an excellent article on the above subject, which appeared in the N. E. Farmer. His views are sound and correct, and many of them based on his own experiments. The use of the *roller*. he considers of prime necessity in the proper cultivation of light soils, and both reason and experience fully corroborate his views.

Where we entered it at the mouth of the Ohio, it is a mile wide, and this when in full bank, is about the average width to its embouchure in the Gulf of Mexico. In some places it is not more than half a mile wide at high water, at others, including islands, it may be five miles; the greatest width without islands, as near as we could judge, is at Cat Fish Bend, where its probable spread is two and a half miles. These distances of course, do not extend to the great overflowing, as these are sometimes 40 miles in width. But as the banks are covered with a thick growth of forest trees, through which there is no view, and when cut away, a levee is thrown up to guard the land, these are ever the boundaries to the eye, on this mighty stream. At low water where shallows and sand bars exist, it becomes very narrow, occasionally not over 40 rods wide. When we passed down, the water was at full bank, and exceedingly thick and turbid from the wash of its alluvial borders, and bore itself in an immense volume, boiling and wheeling majestically along, buoying on its surface large masses of drift wood, and enormous trees washed away from the banks, and driven high in the overwhelming current, till planted in mid stream as some dreaded sawyer, or lodged in shallows, forming the nucleus of a new shore or island.

There are a few bluffs, as at Memphis, the Walnut Hills, Natchez, Baton Rouge, and sometimes places jutting out on the river like bold headlands, but the banks generally are low and flat of a width of one mile to forty, composed of an alluvial of unsurpassed richness, and of almost unfathomable depth.

From the mouth of the Mississippi to that of the Missouri, a distance by water of about 1300 miles, these deep alluvial bottoms exist of a supposed average width of 20 miles, nearly all of which will be susceptible of a high state of cultivation for corn, cotton, rice and sugar, when the forest shall come to be cut off, and the rays of the sun let in upon the land, and embankments raised to keep out the high water. This is but one small portion of this vast country, judge then of its almost incalculable agricultural resources.

Southern staples at present are very low, sugar especially, which hardly pays the expenses of cultivation, and with the threatened increase on the part of the British government of growing cotton in the East Indies, and an over-production of the article in our own country, the South has determined to partially revolutionise its system of agriculture, and instead of purchasing largely as heretofore of their northern neighbors, the planters have now commenced raising their own horses, mules, cattle, hogs, sheep, corn, and the small grains, and are determined to tan their leather, and manufacture all their common cotton and woollen clothing, hats, boots and shoes; and put the excess of their labor only into cotton, sugar and rice. In this way, they say that they can live independently within themselves, but the change will be a great blow to the industry of the western farmers; the South has hitherto been one of their best customers, and now it is likely to become a competitor, and under these circumstances we see no hope for the North and West, but to rouse at once and manufacture every thing that is profitable to consume, and thus make a home market for their agricultural products among themselves.

Let us now consider the advantages of the South for the proposed change. On the prairie districts, like the Opelousas, wild grass grows the whole year round, and vast herds of cattle are supported upon it; on the river bottoms, the forest is full of cane and other succulent food, on which they thrive remarkably. Then as to the cultivated resources, rye, barley and oats do well every where, wheat is a fair crop upon the uplands, and we dont know why the Egyptian variety from the valley of the Nile, would not be equally productive on the lowlands. Corn may be planted from the 15th February, to 1st July, and be sure of a crop at the latest season, if the summer do not prove too dry. As to the grasses, we never saw any thing like such thick, rank white clover as we found springing up naturally on the bottoms of the Mississippi: red clover grows remarkably and herds grass, orchard grass and red top no doubt would do equally well, especially the latter. Then there is a fine natural grass, very much in appearance like the blue grass of Kentucky, (*poa pratensis*) the Herba Hispania, the Cuba and Bermuda grass, (these two last are probably the same variety,) that grow from September till June quite abundantly; we presume they would flourish nearly as well in the summer, under the shade of the trees, in parks, or if the meadows were moderately irrigated, in the same manner as the rice fields are on the river; but even if grass fails, plenty of corn sown broadcast, may be ready for soiling by the 1st of June, or earlier, and it would be much easier to feed stock here under the shade of the trees, for three months in the summer, than five or six, as at the north in the winter.

Except a few varieties of the apple, which we have no doubt, may be acclimated, all sorts of fruit and vegetables that we have at the north flourish here in the greatest perfection, besides many known only in tropical climates. Every thing planted in New-York in April, may be done so as far south as the 31° of latitude in January, and what follows in May and June, may be planted in February and March. We left New-Orleans early in May, at which time strawberries and cherries were out, and green corn from an early northern variety; new potatoes, beans, blackberries, and such fruit and vegetables generally, as we do not get till July, were plenty in market.

The stocks of the country, are the descendants mostly of the old Spanish and French cattle introduced into the country, when occupied by the those emigrants. The latter have enormous long horns, curling curiously out from the side of the head, something like a merino buck's, while in the clean sinewy limbs of the latter, we thought we could trace an affinity of blood to the Isle of Jersey breed. They make very good working cattle and pretty fair beef, but the cows are generally very poor milkers. The sheep are principally of the old Spanish stock, with long fine spindle legs, long neck, sharp on the back, but tolerable heavy quarters, and as delicate mutton as we ever tasted. The fleeces are light, and of a medium quality, and without wool on the legs or under the belly. It would be difficult to trace the blood of their swine, unless they have a cross of the Mississippi alligator in them. Suffice it to say, they are generally as wretched brutes as one need look at. Great improvements, however, are now going on in the stock department since the formation of agricultural societies. Very superior blood horses are now produced here, and quite fair ones of the utilitarian kind. Mules are not bred as large as in Kentucky, but in these they are improving. Short Horn, Hereford, Devon and Ayrshire cattle have been sparingly introduced, and the benefits of their crosses are beginning to show, while the Chinese and Berkshire hogs are occasionally seen scattered along on the plantations. There are some fine flocks of Merinos and Saxons, and now and then a South-Down and Leicester. The latter variety of sheep is pronounced too gross and fat to endure the climate, and the same objection was made to the Short Horns, which would scarce ever survive through the year. We apprehend that their so universally dying there arises from two causes, the first is, they are too highly pampered in flesh when bred, and are not introduced at a sufficiently early age to pass through the ordeal of acclimation.

Among the most efficient that we recollect in introducing improved stock into the south, are Messrs Bagg and Wait, who went twice out to England for this purpose, and brought back Short Horns, Cart horses, and Cleveland bays; South Down and Leicester sheep, and Berkshire hogs. Mr. Robt. W. Scott, of Kentucky, took a fine lot of Short Horns to Mississippi last winter, and Mr. Affleck, editor of the Western Farmer and Gardener, embarked early last fall with a superior lot of cattle and swine from the States of Ohio and Kentucky, and remained all winter, and took particular pains in distributing his animals as widely over the country as possible. Many others have doubtless contributed more or less to the introduction of superior stock into that region, among whom we recollect Messrs. Hendrickson, Mahard, and Beech of Ohio. We trust that the demand in that country will warrant a continuation of the same laudable movements hereafter.

New Orleans is a populous beautiful city, and its hotels particularly magnificent, larger even than the Astor House in New-York. The Cotton Presses also are of great extent; one covers an entire square, and is 600 feet long, by 400 wide. The churches, hospitals, prisons, and the government Mint, are worthy of notice. The old French cathedral is the noblest piece of antiquity America can boast of out of Montreal. In the old part of the town, owing to the prevalence of the French Language and style of architecture in the buildings, one can hardly believe himself in the United States. The markets here are particularly worth visiting; fish and flesh are displayed in great profusion, and plants and flowers, and all the varieties of the north, together with a great variety known only to the south. The foreign exports are second only to New-York, and the river displays a vast variety and great extent of water crafts, from the humble flat boat up to the full rigged merchant ships, and sea and river steamboats.

Notwithstanding the banks of the Mississippi are generally so flat, a sail up its mighty stream particularly from 50 miles below, to 200 miles above New-Orleans, is varied and delightful. The country is cleared up from one to four miles in width and under a high state of cultivation. Fields after fields, continually present themselves to the enraptured eye, some of which are not less than a thousand acres under a single fence, of sugar, rice, cotton and corn, interspersed with meadows of rich grass, dotted by large numbers of horses, mules and cattle, sheep, goats and hogs. The planters however, are scattered thickly along, mostly in the old French and Spanish style of architecture, with piazzas all round, many of these are of imposing appearance, surrounded with beautiful gardens and ornamented grounds, hedged in by the

Orange or Cherokee rose, and where bloom the magnolia, the pomegranate, the myrtle, and a hundred other things, known only to the north, except in a stunted form in conservatories. The quarters of the slaves are neat white cottages, close by and clustered together, form quite a little village, while in the back ground rises the extensive cotton press, or large sugar houses, grouping picturesque enough at the distance, with their tall round tower like chimneys. The forests are noble, and among other trees embrace the live oak, magnolia, cypress, cotton-wood, peccar, coffee tree and sycamore. From the branches of these, waves the Spanish moss in drooping festoons, giving them a most hoary and venerable appearance, while up their tall trunks creeps the ivy and "gadding vine," clothing them in the evergreen freshness of youth.

Tour in England. No. 4.

For a miracle, the day proved fair which was agreed upon with our minister, Mr. Stevenson, to accompany him to Babraham, for the purpose of selecting some South Down sheep, from Mr. Webb's superior flocks, and at half past eight o'clock, on a fair September morning, we took our seats in the Norwich coach at the Golden Cross, close by Charing. The guardsman blew a merry blast from his bugle, the stable boys cried "all right," which was reechoed by the coachman, the crowd gave way, and with a mettlesome team of four high bred coursers, we instantly commenced our jaunt. Our way led through the older part of London, and having passengers to take up here and parcels there, it was a full hour before we had fairly emerged from the almost interminable labyrinth of narrow crooked streets, half shut out from the light of day by high gloomy walls of squares after squares of soot-covered houses. The country was quite flat, and presented much the same aspect before described in the vicinity of London, till we came to Epping Forest, which we found covering a large tract of wild land, the soil a hungry leechy gravel, altogether too poor for cultivation, and from time immemorial, has been suffered to grow over with thickets of bushes and trees, interspersed with small patches of coarse grass, where rose humble but picturesque cottages, peeping out from the dense mass of foliage so wildly surrounding them, and forming within the short space of a few miles, as complete a contrast as could be well drawn by such a scene, and the mighty mass of brick and mortar, composing the vast city from which we had just emerged.

Save the oaks which were few and scattering, and reserved for the use of government, the neighbouring cotters possessed here the right of the wood, and as fast as the tops and branches of the trees became a little grown, they were pollarded down and lopped off by them for sale, giving the forest a dwarfish and scraggy look, the most singular possible to an American eye. Government, we were informed, held the right of pasture, but the lords of the manors around, that of the soil, and to them, by a process that a long headed English lawyer alone can explain, the rights of the cotters and government are occasionally escheated in detached portions of the forest, when the lords immediately enter upon possession, and append these strips of common to their already overgrown estates, extend their hedges or walls around, and commence replanting them principally with evergreens, and notwithstanding the poverty of the soil, such is the humidity and mildness of the climate, that the trees grow with rapidity, and from their thinnings and cuttings soon begin to pay the owners as large an income for the land thus planted, as if of a richer kind, and under a high state of cultivation.

The smaller game, such as hare and phaesants, were quite plenty here formerly, with now and then a stray deer, but latterly the forest has been so much poached upon, that nearly all wild animals have become extinct within its shadowy precincts. But to make amends for them, and which is much better, plenty of tame ones have taken their place, such as the cotter's cows, donkeys, a dwarf hardy race of sheep, and geese innumerable, that they fat here for the London market. As we were returning to London, we overtook a single flock of eight hundred on the road, driving up from the lower country to be parcelled out in Epping and the neighborhood, for preparation and convenience to their great market.

After doing up fifty miles or more of a superlative McAdam road, at the gay and rattling pace of ten miles an hour, we halted at a roomy cottage inn, where we found the portly form, and cheerful ruddy face of Mr. Webb, waiting to receive us, and all bundling into his roomy gig, we started off some three miles farther from the main road for his hospitable mansion. In this country there is no use in attempting to do business, till the inner man is provided for, so *imprimis*, we must set down to a hearty lunch and a chat, and then *secundus*, we were allowed to walk out and inspect the flocks, which doubtless looked to our eyes one hundred per cent better on a *full* stomach, than an *empty* one.

We recollect when landing from our ship at Portsmouth, and taking our course on the top of the stage coach through Hampshire, of seeing in this our first days ride in England, more than thirty thousand South Down sheep, dotting the hills in every direction, attended by their faithful shepherds and dogs. These were the indigenous sheep of the country, the *unimproved* South Downs, and though a hardy thrifty race, and making the best of mutton, their carcasses are light, and saving the deep twist and heavy quarters, are rather ill shaped and deficient in the requisites of a superior feeding animal; it was wonderful therefore to see in the flocks now exhibited to us by Mr Webb, what an improvement, science, skill, and perseverance on the part of man can make in the forms of the animal creation; verily they are as clay in the hands of the potter, to be moulded and fashioned according to his will.

Mr Webb is a tenant farmer of some five hundred acres, of what we should call very poor land, on the estate of the Hon. W. Adeane of Babraham Abbey; but this land he was managing with admirable skill, and by means of his stock, manures drawn from other sources, and a systematic rotation of crops, he was obtaining a product of grass, roots, and grain from it, that would quite astonish the farmers of some of our own fertile river bottoms. We think however, that he has great advantages in breeding sheep, for in addition to his own large flock, he has the management and selections of his lords, and also his brothers some three miles distant on another farm of the estate, and certainly, when we take the size of these superior animals into consideration, their fineness of point, beauty and perfection of form, great weight and closeness of fleece, we cannot but admire them, and feel, as if their improvers from Ellman down, have conferred a lasting benefit upon their country, and are better deserving the honors of knighthood at the hands of their sovereigns, than half of the baronets through the land that have hitherto received the Royal accolade.

Mr Webb's sale of mutton at markets, and of choice animals to breeders at home and abroad, is extensive, besides having an annual ram letting for the season, which he does by auction in the month of July. What his income from these are, it would have been impertinent to inquire, but it is doubtless a large amount. The sire of the buck that we purchased for Mr. Rotch, was hired that season by the Duke of Newcastle for one hundred guineas, ($500), and we suspect that the average of his lettings was full 30*l.* per head, which probably yielded him an income of at least $6000 per annum from this source alone, a sum, the receipt of which, would rather astonish any *tenant* farmer in America. But Mr Webb excels in breeding sheep, and at the great annual show of the Royal Agricultural Society; the past year at Liverpool, he was so fortunate as to carry off all the prizes, except one, for South Downs, although he had to contend with such distinguished breeders as the duke of Richmond, Messrs. Ellman, Grantham, Carver, Catlin, Barnard, Lugar, Whitmore, Hayward and Crisp. Yet this by no means lessens the value of these gentlemen's flocks in our estimation, besides several others that we had the pleasure of looking at during various journies over England, who did not show. To give an idea of the weight of Mr. Webb's animals, the buck selected for Mr. Rotch, though only six months old, weighed 152lbs. on the scales; Bishop Mead's, eighteen months old, 248lbs., and Mr Stevenson's of same age, 254lbs., while a wether, exhibited at Cambridge on Christmas-day 1840, weighed dressed with the head on 200lbs., aside from yielding 28lbs. of rough tallow. The average weight of his wethers however, at eighteen to twenty months old, is but about 30 to 35lbs. per quarter. The bucks shear from 9 to 11lbs., and the average shearing of the whole flock is 6lb. 15oz., and of a quality of wool that we thought better than the generality of South Downs. The fleece is close and compact, and we should think would resist rain, sleet and snow, nearly as well as the best Merinos.

The management of these flocks is much like that of sheep mentioned in our second letter in Berkshire, and we do not think it worth while to enter upon minutia at the present moment. They are very hardy and are never housed in winter, but lie in the open fields and are fed upon hay, with cut turnips, sugar beet or mangel wurzel. In the summer they are taken to rather a poor pasture by day, at a distant part of the farm for change and exercise, and towards night are brought near home, and folded on vetches, clover or rape. The lambs, after weaning are turned into fair pasture, and fed about a pint each per day, of beans, oil cake, or some kind of grain. Mr Webb says, he is an advocate for good feeding, and that a good animal always pays well for it. This is our doctrine, and if people want South Downs to starve, they had better, take up with the smallest of the old unimproved race.*

---

* These are exceedingly hardy, and will live on the forest downs (high chalky hills), and on miserable heaths, like Bagshot, where the grass is coarse and sour, and the ground is thickly overspread with canada and other thistles and prickly shrubs. We acknowledge that the South Downs are very favorite sheep with us, and we make these precautionary remarks about sheep, lest it should be thought that we were saying too much in their favor. We will now add, that when we looked at Mr. Smith's flock, of Ohio, in March, they were in fine condition, and with the addition of a little hay, had lived entirely in the

From sheep we now passed to the inspection of the Short Horns, of which Mr. Webb had a few, and Mr. Adeane quite a herd, derived principally from the celebrated stock of Earl Spencer, and if you will believe it, my fair countrywomen, we here met the ladies of the Abbey in plain morning dresses, bound upon the same errand as ourselves, and they were the daughters of one of the oldest and most reputable families in England, and had just returned from a two year's tour abroad in France, Germany and Italy, with refined minds, and elegant manners, and yet they could be *interested* in Short Horns.*

But it is not as a stock breeder alone that Mr. Webb excels, for we found him quite as particular in his field crops as in his animals. He is one of the few in England who have commenced the cultivation of the sugar beet, and he gives it a decided preference in its season, over Mangel Wurtzel and Ruta Baga. Many of his observations on these matters are worth recording, showing how particularly and minutely an enlightened English farmer studies his subject and makes his applications. Drawing a Swedes turnip from a patch in a large field over which we were walking, he desired us to taste it, and we found it sweeter and apparently more nutritious than the roots taken from another patch. Now, " said Mr. W.," you would pronounce the first decidedly the most valuable, and would undoubtedly altogether reject the last." Certainly, we replied. " But that wouldn't do with me," he adds, " for the first kind pulled, I found on experiment, would not stand the hard frosts of winter in the ground, whereas the last will, so that I am obliged to use the former for fall feeding, and keep the latter for the winter and spring." On a hill very much exposed to bleak winds, we found that he was cultivating wheat and barley with short coarse thick straw, in preference to the long fine straw of the same grains in lower or less exposed lands, and on expressing our surprise at this, he smiled and replied, " that the coarse was the only straw that could stand the winds, and if he sowed his grain there, which produced the fine straw, it would always be blown down, and he could never save a crop." It is by such study and application of particular things, best suited to particular localities, that the English farmer obtains the superior products that he does from a given number of acres, and his example in this particular, is worthy of a more general adoption than at present prevails throughout America.

Having an invitation to dinner at the Abbey, we now dressed and walked over. The buildings are in the Tudor style of architecture, solid, elegant, and commodious; and surrounded by a noble park of Oak, Elms, and the fragrant flowering Linden tree. Col. Scott of the Horse Guards, and a veteran Peninsular campaigner, was down here for the shooting season, and did the honors of the house, and every thing within was in that quiet and refined taste that is always to be found in the well bred circles of England, and which puts the stranger at once at his ease, and makes the hours pass away so agreeably. Adjourned from the dining table to the drawing room, we sipped our coffee, and gazed out upon the exquisite little parterre, or French flower garden, bordering the full rich green of the smooth shaven lawn. The moon had just risen, silvering the tops of the deep shadowy trees of the park, and now played with its mild beams on the soft velvet turf, forming a scene as sweet, " as the bank whereon the mild thyme blows." Fit hour me thought for fairies to hold their revels here.

The next day, Mr. Stevenson was obliged to leave to attend business at the Foreign Office in London, while we remained to pay a visit to the University of Cambridge. On our way thither, we passed the estate of Lord Godolphin, a descendant of the celebrated owner of the Godolphin Arabian. It was here that this noble animal was kept and found his last resting place, and in passing his tomb, it may cause a smile from our readers, when we inform them, that we made a momentary pause in passing, and lifted our hat in reverence to the memory of so renowned a horse. We spent

---

open field on dead standing grass all winter. A flock in Economy, Pennsylvania, though strictly bred in and in for several years, and of course likely to have deteriorated in constitution. looked well in May, even with large lambs by their side, and had been fed, as we were assured by the manager, nothing but hay; and a letter received three months since from Mr. Rotch of Otsego, who resides in a cold latitude, says, " my ewes have had nothing but hay, and never looked better." He has a high-bred flock, carrying in it, the blood of the Duke of Richmond. Messrs. Ellman's and Grantham's, and now that of Mr. Webb's. In looking at his sheep in May 1841, we thought them in too high condition, but Mr. Hollis who showed them to us, replied, " notwithstanding the winter has been severe, they have only had a few turnips with their hay."

* One of the greatest charms in England is the attention that ladies bestow on agricultural affairs, it is the same among our warm hearted countrywomen of the South, who are as great exhibitors in their particular departments, as much interested, and as numerous in attendance at the shows and fairs, as the gentleman, if not more so. It is the case also at the fair of the American Institute in this city, and we hope ample accommodation will be made for the ladies, at the forth coming show and fair of the State Society in September, at Albany, and all be invited to attend. Every member should bring his wife and daughters with him, we mean to set a good example by bringing *all* that we happen to possess.

pretty much the whole day in visiting the college, admiring their exquisite Gothic architecture and wandering by the classic Cam, and through the beautifully adorned parks and pleasure grounds for the Fellows and students, and thinking what famous people had trod there before us. But it is not the province of these sketches to dwell upon such themes, and we pass them over in silence. This is the neighbourhood of a large dairy district, and we obtained some valuable information upon the making of butter and cheese, which we shall communicate hereafter. A.

Cultivation of the Grape.

It is as simple and easy to cultivate the Grape, and manufacture Wine from it, as to set out an orchard and make cider from the apples.

The best soil for the vine is a light dry loam, with a slight intermixture of clay and calcareous matter, moderately rich, the ground inclining a little to the South. This should be plowed in the fall of the year, at least one foot deep, and trench plowing would be better, making one plow follow directly after another in the same furrow, turning up the ground if possible 15 or 18 inches deep. The utility of this is, to give a light deep surface for the roots to strike into the earth, and thus draw the more nourishment from it, and be sufficiently low and out of the way of being cut off, when the plow is run between the rows for after cultivation.

Planting and Culture. Early in the Spring before vegetation commences, re-plow and harrow the land fine, strike off the rows 6 feet apart, then take cuttings or roots as they can be best obtained, and plant them three feet from each other in the rows. As the vines grow they will require staking and tying up with the stalks of long tough grass, or green flexible straw. The after cultivation is precisely like that of Corn or any root crop, it being necessary merely to plow out between the rows occasionally, and keep the weeds down by hoeing the ground about the vines, where it may be slightly elevated from the centre of the rows, in order to keep them from standing water. Two vines only are left from each main stem of a different year's growth, the rationale of which may be thus simply defined. The branch that grew for instance in the season of '40, bears in '41, and the spring of '42 it is pruned off, and that season another grows in its place, prepared to bear in '43, while that which grew in '41, bears in '42, and is cut off in '43, and the one growing in '42, when the last gave fruit, will bear in '43.

A well cultivated field of grapes, in a reasonable favorable season, will yield 100 bushels to the acre. In this city they are worth 5 to 10 cts pr. lb., in Cincinnati, the vicinity of which is quite a grape region, they readily sold the last season at $4 per bushel for the table. One hundred bushels will produce 300 to 400 gallons wine, which is worth at least $1 per gallon, so that it will be seen, that the cultivation of the Grape and making wine is quite a profitable business.

To make Wine. Gather the grapes when fully ripe, put them into a common wash-tub, take a wooden pounder, precisely like that used by women when washing to pound out the clothes, and with light blows thoroughly mash the grapes. Then take them to a screw press made like those used for pressing cider, but instead of laying up the pulp of the grapes in straw, like apple pomace, take pieces of joist 3 inches square, and cut out mortices in each end, and lock them together as high as the pulp is to be laid up, say about 3 feet. These make a firm square box, that will endure a very strong pressure from the screw, which is quite necessary to squeeze out all the wine. Many put a double purchase on the lever of the screw, to better effect this purpose. When the the bruised grapes are laid up, fit a plank top just large enough to lay inside the joist to bear down the pulp, place blocks on this, and then commence pressing. Let the wine run out into an open tub, and if it will bear an egg, that is, swim it on the same principle as the strength of lye is tried, commence filling the barrel, but if not strong enough, add from four to ten ounces of sugar per gallon till it will bear the egg.

After being placed in barrels, if the weather be warm, the wine will commence fermenting in a few hours, if cool, in a few days; and if cold, not short of a week or fortnight; in fact, it is subject to pretty much the same natural rule that cider is, and perhaps the better way of producing fermentation, is to place the casks as soon as filled in a cellar, of a temperature of about 50° of Fahrenheit, and thus keep it till fermented and ready to be bottled. If not removed to a cellar previous to fermentation, it should be done as soon as this process is gone through with, and in the following February or March, let it be racked off by tapping the barrel within three inches or so of the bottom, and placing the wine thus drawn from it in another barrel. This should be repeated every year as long as the wine stands in casks, as it tends to purify and improve its quality. If the wine be not clear when the process is attempted, beat up the whites of from three to six eggs for each barrel, and pour in and mix up well, and it will soon settle and rack off clear. To still further improve the quality, add loaf or brown sugar in small quantities to the wine.

Kinds of Grapes. The Cape, or properly, the Schuylkill Muscadel, and the Catawba, both natives of the United States, are considered the best varieties for America, that have yet been tried. The latter is the hardiest and best yielder, and makes a wine very much like the celebrated Rhenish, and we are not sure that it will not eventually prove as good and, command as high a price, for it must be recollected, as yet it has not had sufficient age and care to thoroughly test its qualities. The Muscadel makes a wine tasting something like a mixture of Madeira and Claret. If one pound of sugar be added to each gallon, and it has the advantage of standing 2 years in barrel, and 3 more in bottle, it can hardly be distinguished from fair Madeira. We have tasted such at the house of Nicholas Longworth, Esq, of Cincinnati, that we should have taken for Madeira, had we not been told the contrary, and connoiseurs who pride themselves upon their taste and judgment in such matters, have frequently pronounced it the best of imported, when not informed where made.

The Isabella, and many other varieties of grape are good for the table; but the wine from them either proves too light bodied to keep, or comes out sour, crabbed, and rough. We look upon the cultivation of the grape as in its infancy among us, and have no doubt, especially in the valley of the Ohio, where the climate and soil so admirably suit, of seeing it brought to great perfection in the space of a few years, and if we must have wine, let the millions that are expended abroad, be saved at home by the cultivation of the vine among us. A certain amount of fermented wine is wanted in the arts, and also in some cases of disease, and may be preserved sweet as in ancient days, to the use of which under this form, none can make objection.

Mr. Longworth of Cincinnati, is paying considerable attention to the cultivation of the vine, and in the neighborhood of this beautiful town, he is laying off terraces along the steep hill sides, with solid stone walls after the European manner, at an expense of some $300 per acre. He has lately discovered a new variety of grape, that promises highly, both for wine and the table. He gave it the name of Segar-box, because the cuttings were accidently found there. We beg leave to change the name, if no objection be offered, and to henceforth designate it as the Longworth Grape.

For most of the information contained in this article, we are indebted to visits among the Swiss and German settlers, who are cultivating the grape with considerable success in the valley of the Ohio, and especially would we make our acknowledgements to Mr. John E. Mottier, who to his Vineyard, adds a fine Fruit and Vegetable garden.

Agricultural Report, *of the Home Industry Convention.*—We have received and read with great pleasure the report of the Chairman, Hon. H. Denny, of Pennsylvania. It is a full and able document, and we regret we have not room for it entire, in our paper, but the press of other matter renders it impossible. We give two of his statistical tables. They are *significant exponents* of the policy our farmers must pursue, to secure an adequate reward for their labor, and the considerate and reflecting will not fail to draw conclusions of vast consequence that is to result from the future policy of this country. The Report will soon be published entire for the public by the American Institute of this city.

Value of Foreign Imports, and of the quantity of Flour, Beef, and Pork, and value of all Agricultural produce, including Rice, except Cotton and Tobacco exported annually by the U. S. from 1827 to 1840.

YEAR.	FOREIGN IMPORTS, value in Dollars.	DOMESTIC EXPORTS.			Total produce of Agriculture exported, except cotton and tobacco, including rice &c. Value.
		FLOUR. bbls.	BEEF. bbls.	POLK. bbls.	
1827	79,484,068	868,492	90,685	73,813	11,128,475
1828	88,509,824	860,809	66,640	53,836	10,853,686
1829	74,492,527	837,385	51,100	59,539	12,396,299
1830	70,876,920	1,127,434	46,842	45,645	11,716,080
1831	103,191,124	1,806,529	60,770	51,263	17,826,408
1832	101,029,266	864,919	55,507	88,625	11,691,732
1833	108,118,311	955,768	64,322	105,870	13,725,246
1834	126,521,332	835,352	46,181	82,691	11,337,080
1835	194,895,742	779,396	38,028	61,827	11,838,085
1836	189,980,035	505,400	50,226	22,550	10,282,359
1837	140,989,217	318,719	28,076	24,583	9,349,532
1838	113,717,404	448,161	23,391	31,356	9,245,607
1839	162,092,132	922,151	16,189	41,301	13,851,919
1840	107,141,519	1,897,501	19,681	66,281	18,771,075

The average number of Barrels of Flour, Beef, and Pork, exported annually from the United States from 1791 to 1805 inclusive, taken in periods of five years each, also the average anual exportation from 1791 to 1805 and 1827 to 1840 inclusive.

Years.		bbls. flour.	bbls. beef.	bbls of pork.	
1791 to 1875	inclusive	810.433	81,906	84,415	avg. per annum
1795 to 1800	"	596,139	79 940	50,971	"
1801 to 1805	"	1,031,613	93,042	83,015	"
1791 to 1805	"	812,728	84,962	72,800	"
1827 to 1840	"	930,572	46,981	57,798	"

It would seem almost like supererogation to draw any conclusions so obvious to every intelligent man, on looking over the above tables. It will be seen, that although we have multiplied our agricultural products within the last 50 years immensely, yet the average exportation of flour for the last 14 years, including that of 1840, which shows the largest exportation ever made, we have only exceeded by about one eighth or less than 118,000 bbls, the average exportation of 15 years commencing in 1791, *while our exportation of Beef is diminished nearly one half*, and that of *Pork about one fourth in the same time!* Surely our grain growing and meat producing states, must see great encouragement for the future, in the *increasing* demand from abroad of Northern and Western staples! It is quite unreasonable, so deem the abstractionists and politicians, that the farmers should think of seeking an outlet for their products among their own manufacturers who are willing to take them in exchange for whatever they produce themselves, which we have found after 50 years experience, Europeans will not do. But there is another conclusion to be drawn from the above tables still more remarkable. While we have been importing for the last 14 years over $115,000,000 annually, the aggregate exports from the North and West, and every thing in the South, excepting Cotton and Tobacco alone, but little exceeds $12,000,000 annually for the same time. And yet we wonder that exchanges are disordered, every department of our business paralyzed, our credit gone, and our industry and enterprise prostrated to the dust! If our grovernment was not formed to protect us from such a humiliating and needless calamity, we will thank some casuits to inform us what was the object of its organization.

Corn-Stalk Sugar.—Five or six years ago, the great enquiry among the citizens of the U. States was, how they should procure sufficient provisions for their sustenance; now it is, what shall be done with our surplus products? It is not probable that our crops on the whole are more productive, acre for acre, than they were from 1832 to 1840; but we then had more prosperity among our manufacturers, and many that are now cultivating the earth as the only means by which a subsistence can be obtained, were then profitably employed in the various mechanic arts. But a still larger share, from a fancied prosperity in their own condition, were wasting their time, in Quixotic adventures, insane speculations, or luxurious and profligate idleness. *Want* has returned a large proportion of the latter to the class of producers, where they properly belong, and disaster among a large number of our manufacturers, has compelled them to discharge a considerable portion of their workmen, and turn them over to the cultivation of the soil, unwilling rivals of the great agricultural interest. The country was sadly out of joint then, it is almost equally out of joint now; but we trust there are causes in operation that will soon recover all our important national interests, and restore health and prosperity to the body politic again. Another great cause, though a recent one, for the surplus of corn, a most important product of the

South and West, is the great and glorious progress of the *temperance cause*. This mighty movement, resistless as the onward tramp of an invading host, but with purposes fraught with mercy, instead of banners bathed in blood, has, within scarcely more than a single twelvemonth, effected an almost entire revolution in the manufacture of alcohol. Millions of bushels of corn and rye, for which, but a short time since, a large price was paid for the purpose of converting into poison for the human race, is now accumulated in the hands of the producer, or sent to eastern or foreign markets for sale. The effect of adding so large an amount to the former supply, has been to reduce the article in the hands of the farmer to a ruinous price. The question now is, can some new mode of using corn be resorted to, by which its production need not be diminished? The manufacture of sugar from the corn-stalk has been lately suggested, and urged with much apparent reason. It is certain, our fathers during the Revolution, when almost all imports from abroad were cut off, resorted to the corn-stalk for a supply of his syrup or molasses, and that it was from this source furnished in large quantities. Its conversion into *sugar* has been attended with some difficulty in the crystalizing, but this it seems is yielding to the results of science and experience. This is a project of much interest to us as a nation, as is shown in the great amount of sugar consumed and manufactured in this country. To supply this demand, there was imported into this country in 1840, besides the very large amount we produce ourselves, over 121,000,000 lbs. raw sugar, at a cost of $5,600,000. That a portion of this is exported after being refined, does not alter the question, since we do not export it in a refined state to the countries from which it is imported; nor is it a contingent advantage acquired by us as a consequence of importing. The market for exportation would be just as good and as valuable to us, if we raised this amount within ourselves. With a great redundance of corn, then, and as great a deficiency of sugar, it is certainly the part of wisdom, to test the experiment fully, and ascertain whether we cannot embark in this new branch of manufacture successfully. To allow our readers the full benefit of the information already acquired on this subject, we shall give in the next number, the most material part of a report made by Mr. Webb of Wilmington, Del., and we hope it may lead to fair and full trials in the undertaking.

SCIENCE, is refined common sense, the substitution of rational practice, for unsound prejudice.—*Davy.*

HARVESTING GRAIN.—We have made experiments repeatedly in the cutting of grain, before the stalk had fully ripened, and have universally found the benefit of the practice. The proper time for cutting, is immediately after a portion of the stalk turns yellow. When the straw assumes this appearance, which commences at the bottom and advances upwards, the sooner it is cut the better. No nutriment is conveyed from the soil to the grain after this change of colour takes place, and by harvesting it at this time, there is a positive increase in the *quantity* of the grain; the *quality* is better, the straw is more valuable; there is comparatively no loss by shelling, which always occurs, and frequently to a ruinous extent, when over-ripe; and there is a better chance for securing the crop.

In confirmation of these views, we quote from an experiment carefully made by Mr. Hannam, in England in 1841, the lateness of the season, and long period required for ripening the grain, are accounted for in the excessive humidity and coolness of English summers. He says "on the 1st of August, I cut a small portion that was quite green, that is, both straw and ears were in full vigor, and full of sap. Though the grain appeared perfectly formed, the chaff still adhering so firmly to it, that it was scarcely possible to separate them by friction in the hands. When separated it was large and plump, but so full of milk that the slightest pressure reduced the whole to a juicy consistency or pulp. This sheaf stood in the field for a fortnight, when it was housed. On the same day, August 18th, I cut another. The wheat was of course yet *green*, speaking positively, or *not ripe*, if we speak negatively—being what farmers commonly term *raw*—that is the straw, though appearing at a distance green, when examined closely, was of a hue fast approximating to a yellow; while, for a foot upwards from the ground, it was quite yellow. The ears too were more open, the chaff tinged with various shades of yellow and green, and the grain itself, when separated, soft and pulpy, but not near so full of fluid as before. The judgment of the farmer will, however, best tell him the condition of the wheat, both at this and at the preceding cutting, when I say, that in another fortnight the whole field was ripe. At the end of this fortnight, (September 1st), I housed the sheaf cut on August 18th, and which had remained exposed to the weather in the interval, and cut a third. This I have said was *ripe*, but by the term I don't mean that degree of ripeness when the straw breaks, the ears curl, and the grain shakes out; but that condition in which it is customary to commence reaping it, when the straw from the roots of the ears is uniformly yellow, and has lost all symptoms of vivid health."

"On the 14th of September the third sheaf was taken from the field and carefully preserved, along with the other two, till the 1st of November, when out of each sheaf I selected a hundred ears and put each parcel into a separate bag. The straw from each of these parcels of ears was preserved carefully."

The result of the several parcels are as follows:

	£ s. d.	£ s. d.
No. 1. prod. 26,135 bus. per a. worth 7s.7½d.	9 19 3¼.	per acre.
195½ st. of straw worth 1s. 2.	1 12 7	11 11 10¼
No. 2. 30.131 bus. worth 8s. nearly	11 19 1¾.	13 7 3¼
168 st. of straw worth 1s. 2d.	1 8 1¾.	
No. 3. 30 bus. worth 7s. 8¼d.	11 10 7	12 17 3
160 st. straw worth 1s. 2d-	1 6 8	

Showing a loss of 1*l*. 5*s*. 5d., or taking No. 2. as the standard value, a loss of 13 per cent. in cutting too green, and a loss of 4 per cent. in cutting at the usual time.

It is seen above there is 4 *per cent* in favor of cutting grain which is just beginning to turn, over that which is moderately ripe, an item worth saving, but this difference will be increased from loss of shelling, from 10 to 25 per cent, if left till fully ripe.

Home Industry.—The communication of W. S. F., on this subject is received, and though a well digested, able article, is inadmissable with our present limits. We have deemed it a duty to our farming interest, from which we had no right to shrink, to say as much as we have done, but having expressed our opinion on the general principles of the subject, we do not feel at liberty to persue it. The few pages of our sheet are required *exclusively* for such matters as pertain to the farmer's peculiar occupation, and such as he can expect to find in agricultural journals only. It is the proper duty of the miscellaneous papers to attend to this subject in its details, and to them we must leave it.

Coloring Cheese.—It was generally the practice some 20 years ago to color cheese with *what was called Annatto.* We are happy to say however, this absurd, unmeaning, filthy and abominable practice, has fallen into almost entire disuse in this country; but for the benefit of the few who may yet continue to use it, we are induced to expose the manufacture of this pigment, though we very much fear such will not be reached through the medium of *book-farming*. These are not the persons to be taught by *book-farmers*, yet we may hope to benefit them indirectly by such of their neighbours as have intelligence enough to take information from every source through which it can be obtained. From a foreign paper we glean some of the facts we detail below. *Pure Annatto* is the product of a plant indigenous to S. America, but recently cultivated to a considerable extent in the West Indies. It is a tropical shrub or tree which retains its leaves through the year, and produces its fruit in the season answering to our spring. It is a species of the Bixa, and its botanical name, Annatto Orrellana; grows about 10 feet high, sending out elm shaped branches, its flowers are of a pale peach colour, and the seeds when ripe, being surrounded by a red waxy pulp, from which the annatto of commerce, (such as imported,) is extracted. Francis Hernandiz, in his Nova Plantarum, published in 1651, says, "the coloring matter is so tenacious, that when applied, it can scarcely be obliterated, and if mixed with urine is indelible: it yields a red colour for painters, possessing a dryness and astringency, assists in dysentery and restrains belly flux." Miller says" it is used by the natives medicinally in the bloody flux and disorders of the kidneys." Dr Hooper says, "in hot climates it is considered a useful remedy in dysentery, and is astringent and stomachic." Nothing is more obvious from the above quoted indisputable authorities, than that those who have the belly flux, the bloody flux, and disorders of the kidneys, should take Annatto, though there are few doctors who would prescribe it to be taken then, *prepared in cheese*, or mixed with the detestable ingredients that poison it. It being a stomachic, however its use in the smallest quantity would not be so pernicious as might be inferred from the effects sometimes produced from the spurious article. It is the *imitation* we object to principally, as the *genuine* is in too much demand among the painters, to allow its general use by the farmers. The ingredients to make the *most approved modern Annatto are, old bricks reduced to powder, starch tumeric powder, train oil, potash, soft soap, quick lime, chalk and pipe clay, with a slight addition sometimes of the genuine vegetable extract.*— Yet this "villanous compound" has been in so great demand in England, that it was computed 30 years ago, there was consumed in Cheshire alone what cost the farmers $30,000 annually, and in Gloucester $60,000

Cutting Hay.—We intended giving a detailed article on this subject in the present number, but we have not room. We will say briefly, that *clover* should not be cut till a portion of the flowers have assumed a brown color, thereby allowing the more backward buds to develop themselves as fully as possible. It requires to be cut before the leaves have begun to wither. We prefer to have clover cured without exposure to the sun beyond lying in the swath, but those desirous of avoiding the hazard of showers, may facilitate the drying by opening the clover partially. The plan of curing is however preferable, which takes a longer time and exposes the clover as little to the direct influence of the sun as possible. After wilting in the swath for a short time, it should be laid into high cocks of small diameter, and there allow it to remain till sufficiently dried to put into the barn. The cocks should be made with the fork entirely, by laying one forkful on another, not rolling into a heap. This allows the air to circulate freely through the heap, and it will be cured without injury from sweating.

Timothy and Redtop ought to be nearly ripe before cutting; sufficiently so at least, that a part of the seed will fully ripen after being cut. There is less injury to the grass from exposure to the sun than from clover, but there is no doubt that if cured in the swath or cock like clover, it would be more valuable for feeding than when exposed to the scorching effects of our July sun. It would require a longer time to be sure, but if laid up trimly in cocks, it would scarcely suffer from rains, and it would expose but a small portion to the influence of dews.

Some of the natural grasses, such as are to be found in old meadows, require to be cut before the seed is matured, and with many it is an object to cut sufficiently early to secure a second growth of aftermath or rowen. But as a general rule, the sap of all grasses cut before the sacharine matter is pretty well matured, is thin and watery, the hay consequently is much less nutritious than in the more ripened grass, and is not as well relished by stock. The proper period for cutting is best indicated by the *gumming* of the scythe. When this is the case, it indicates a sufficient maturity of the sap.

When taken to the barn or stack, all hay should have a plentiful supply of salt; if quite dry, a peck to a load is sufficient, if damp or not thoroughly cured half a bushel may be required, but we have never found more than this last quantity essential. The exact quantity it is judicious to apply, is what horses, or cattle or sheep, would require while eating the hay; but in applying it in this way, we secure the hay against injury from must, and cattle eat it much cleaner. We have frequently seen cattle leave the best qualities of unsalted hay to fill themselves from a stack of well salted,coarse, swamp grass.

A great saving is always made in raking hay on smooth ground by using a *horse rake.* The revolving rake already in extensive use, is the most perfect, but a simple one can be made by any farmer in a day or less, by taking a stick 4 or 5 inches in diameter, and 10 feet long, in which wooden teeth about 2 feet long, and 8 to 12 inches apart, are fastened in a line, by boring and wedging. These should be shaved to a blunt point, and slightly curved upward. It is managed by two handles projecting behind, and drawn with a single horse attached to a rope, fastened on either end of the shaft. This rake with one man, and a boy to ride if necessary, will perform the work of half a dozen men.

We wish our farmers would adopt the plan of *saving more grass seed.* For the last 2 or 3 years, it has been extravagantly high, from 12s to 18s a bushel. An acre of good Timothy will yield from 12 to 20 bushels of clean seed, and the hay, after taking out the seed, is worth all the expense of cleaning. At the ordinary price, 5s a bushel, it is a better crop than is usually raised. But the principal advantage to the farmer would be in raising his own seed that he would think he could afford to use it more liberally than he does when obliged to buy it, and by this means he would frequently double his crops. Thin seeding is the great fault of American farming.

Agricultural Societies.—We intend devoting a corner in our sheet after the present number, as a Directory to the different Agricultural Societies of the United States, a few in Canada, and three or four of the principal ones in England. As these are very numerous, we shall be obliged to confine our notice to the name of the society, place of the annual exhibition, and names of the President and Secretary. Any member of a society who subscribes to this paper, will on request, be entitled to such insertion gratis.

☞ Some inquiries having been made, as to where letters should be addressed to the senior editor, A. B. Allen; we reply that he has returned from his Southern tour as far as Buffalo, N. Y., where letters will reach him, or if more convenient, they may be sent to our office in this city, and we will promptly forward them to their destination.

☞ If our Subscribers or exchange papers fail to receive our paper regularly, they will please apprise us of the failure, as we intend in all cases to forward to all entitled to it.

Ourselves.—One great source of gratification to us, as conductors of this Journal, is the prompt and handsome manner in which breeders and stock raisers particularly, have come forward to sustain us in our undertaking. We were apprehensive, as we had been formerly interested in this way, that a suspicion might exist in the minds of some, that it was our intention to favor particular breeds of animals. It has been, and will still continue to be our endeavor, always scrupulously to avoid doing so. We hope whatever experience in stock breeding, horticulture and practical farming we possess, will serve but to make us the safer guides. The subject of gardening, field crops, and the renovation and the improvement of soils, will have the preponderance over stock in our columns. In assigning the first place to these, we coincide with a correct public opinion, but as great pains have been taken to produce superior crops the same effort should be continued in procuring improved animals to consume them.

We hope that as this journal is found to deserve it, our friends will exert themselves in its behalf, and as it is received and read by them, let it be circulated among others, that its existence may become generally known. It must be perfectly apparent to our intelligent readers, that at the very low price at which this paper is afforded, a large subscription list is essential to its support. This may be easily attained by a little exertion of our friends, from their neighbors and acquaintances.

Without expense to any individuals, county and agricultural societies, may do much to spread information on the subject for which they are formed, and at the same time sustain the agricultural press, by making all the lower premiums payable in agricultural journals. We shall soon have a handsome bound volume of 384 pages for *one* dollar, for this purpose. Specimen numbers will be sent on request from any friends, with the understanding that they be circulated. Always address through postmasters when possible.

☞ We ask the attention of sheep holders, to the advertisement on this subject in our present number. Those having a surplus at this time, may find a way of insuring for them a handsome interest without trouble, expense, or sacrifice. The applicant we know personally, and have every confidence that any arrangement with him will be fully carried out.

ORIGINAL CORRESPONDENCE.

We are obligingly favored by our friends with a numerous correspondence the past month, part of which we have inserted entire, others we have been compelled for want of room to condense, while a few must lie over till succeeding numbers.

The sheep for J. D. of North Carolina are engaged, and will be shipped last of September, which is as early as we think will do for that climate. We regret he did not allow us more latitude in the choice; a little higher figure would have given him a superb article. Those however, we shall send, are very fine, and will afford a great improvement on what he has now.

We have not met with a Devon bull yet of the exact calibre for G. M., we admire his taste and can assure him it is just the thing for his mountain land. He will see that we advertised for the Ayrshires last month, but the breeders have not favored us with any communications. A friend of ours that we met in the north of England last summer, said he should bring some over with him this season; will G. M. wait their arrival?

Many thanks to R. N. A., for the southern peas, it is too late to plant them this year, but we will give them a trial next season. Also to D. K., for the cow corn. It is a curiosity, but must lie over with the seed peas.

We are greatly obliged to Mr. George Smith of Hamilton county, Ohio, for his flattering opinion of our present work. We have been favored recently with the reception of many such, but have adopted the rule of omitting them in all cases. We accept his kind offer with thanks. He says "the Bellevue Talavera Wheat, referred to in your April No. page 13, which took the premium at the Royal Agricultural show of England, I am well acquainted with, and can give you its history another day." (By all means let us have it.)

"I have known a 40 acre field yield 48 bushels to the acre, weight from 62 to 65 lbs. per bushel; it is a white large grain, and the quality superior to any other kind, and it will rise an inch higher in a 7lb. loaf of bread than the common sorts. I should like to have a barrel of it, if to be had reasonably.

"Your judicious observations with regard to sheep, met my views; you have seen my small flock of imported South Downs, also the Bakewells and Cotswolds. I think you will agree with me in opinion, that the size of each breed will improve just in proportion to their pasture in summer, and attention in winter.

"There appears to be an increasing inquiry after the improved sorts of sheep; no wonder, for they certainly are the best stock on a farm, and particularly adapted to this country."

We think so too, and indeed throughout the whole southwest. We have several orders to fill in the autumn. We wish they had been for thoroughbreds, and the *best of their kind* to be had. We thank Mr. S for the proffer of the English sheep crook, but as we have no use for it just now, and it would be troublesome and expensive sending us, as we do not possess the franking privilege, to *order it by mail*, he will please hold it in reserve for some friend at the west, who may not be so fortunate as to possess as tame sheep as his own pretty flock. We shall enquire at what price the Talavera wheat can be imported.

Mr. Nathan Loomis, of Dranesville, Fairfax Co., Va., with a long list of subscribers, suggests some valuable hints as to the preservation of our paper for binding, for all which he has our cordial thanks. We add his suggestions.

"Would it not be well for you to suggest to your subscribers, some easy method of preserving their numbers of the Agriculturist in a neat and clean state, to the end of the volume? Without proper care taken, such a work will become unfit for binding; but well kept, it will be as valuable in years to come as in the present year.

My way is, on receiving it from the office, to have the folds made in mailing, carefully ironed out, stitched, the leaves cut, and placed in a cover before any one is suffered to read it. I made a cover of book-board, with leather back and corners, finished with marbled paper, of suitable size to contain one year's numbers. I suppose thick pasteboard would answer very well. It is not necessary to fasten more than one or two to the cover—and they need not be fastened together. At the end of the year the volume is in a fit state for binding, and the cover ready to receive the next. Should you recommend some plan for preserving the papers through the year, it may be a benefit to the children of some of your subscribers."

Mr. Charles W. Elliott, of Cincinnati, has written to us about Peach trees. He has just commenced a fine nursery, and thinks in the fickle spring of South Ohio that the Peach should be planted on a northern exposure to prevent an otherwise premature blossoming, and endangering the fruit to be cut off by early frosts. A belt of forest is desirable on the north to break off the cold winds, and he recommends little or no pruning other than cutting out the centre wood, thus forming a large bush, as we understand him, rather, than a tree, which admits the sun alike to all its branches.

We have received from Mr. G. W. Phipps, a plan of "Webb's perfect Bee Hive," which appears to be an admirable contrivance. He says in an accompanying note, "These hives are approved by the most experienced raisers of honey, who say they answer fully the purpose for which they are intended; they effectually keep out the moth. Honey collected in these hives is perfectly pure and white, and has sold as high as 50 cents the pound. The honey is collected without injury to the bees."

Mr. Beach, of Lebanon, O., has forwarded a cure for *Fistula* before it breaks out. "Take Podophyllum (May Apple) root when green and pulverise it fine; then boil in hogs lard till strong, and apply when cold to the swelling for a few days, but care should be taken not to let the liquid run down on the shoulder, as it makes the worst kind of sore. When the hair is about to come on, fresh butter or lard should be applied, and the hair will come on as well as ever, and the horse will not be shy in the withers afterwards. I have cured three in this manner that have remained sound for years."

An old friend, J. H. Hepburn, Esq., of Jersey shore, P. O., Lycoming Co., Pa., after some very complimentary remarks on our work, which, as in all other cases we must omit, and a list of subscribers for which he has our thanks, says—

"If you should be enquired of, for a very superior Durham Bull, and can find me a purchaser for Sam Patch, at a fair price, I will sell him next season. You are acquainted with his pedigree and the characteristics of the family from which he derived as well as I am. As to the properties of the stock of his getting, it is equal to any thing that can be produced, both for fine form and large milking. I can only however, speak of the milking from one heifer that has come in, and that at too early an age; but as she was a good size, and I was impatient to see what she would do, I let her to the bull early. She is now 23 months old, and is giving four gallons of milk, per day, grass fed. My other heifers out of him I will keep back, and when they are in calf, as it will be the third crop from him, I may sell him if I can get his value. Considering the deranged state of money matters, I will sell him for four hundred dollars."

As to the Bull to which Mr. H. refers, we can answer for his *breeding*, he having been produced from some of our thorough bred short horn stock, and though we have not seen him since a calf, we are confident he is a valuable animal, and well worth the price asked for him, even in these *excruciating times.* His progeny is sufficient recommendation for him.

The valuable letter of John J. McCaughan, Esq. will appear in our next. Its reception after our matter was made up, unavoidably excludes it from this.

For the American Agriculturist.

CINCINNATI, MAY 7, 1842.

GENTS.—Among the many little privations which the first settlers of this country were obliged to undergo, I recollect particularly with the younger portion of them, was the absence of the cultivated fruits that we left behind us upon emigrating, and you cannot imagine with what eagerness the children looked forward to the ripening of the indigenous ones of our forests and prairies. Nothing came amiss to us. The May apple, strawberries, raspberries, and blackberries, the different varieties of cherries, plums, and grapes, the persimon, pawpaw, and even the crab-apple and black haw in these days were not to be despised, thus giving us a pretty fair succession of fruits, such as they were, from May till October, after which the variety of nuts came in for the winter's amusement.

But among this different succession of wild fruits, the May apple and pawpaw stood and still stand preëminent. The May apple, or mandrake, grows in thick patches in the forest. Coming up in single stems from 12 to 18 inches in height, the fruit bearers of which branch from 8 to 12 inches from the ground, and throw off the stems obliquely. The leaves are of an orbicular form and lobed in the margin, with that uncommon mode of attachment in the petiole under the center of the disk that constitutes the leaf, which is from 8 to 12 inches in diameter, bearing a near resemblance to those very small parasols, so much in vogue among the ladies as shades.

From the center of the stem where it branches off, issues a single white concave flower, the fruit that succeeds is of a pale green color, the skin thick, the seeds numerous and immersed in a onesided large and pulpy receptacle. When ripe the apple changes to a yellow, is very fragrant, and of a pleasant sweetish acid taste, varying in size from a damson plum, to a medium lemon.

The pawpaw[*] is a plentiful undergrowth of our alluvial forests, and on a deep open, free, mellow loam in the upland. Its presence is an indication of a rich, warm soil. It varies in height and shape, from the straggling bush to the graceful formed conical tree, from 15 to 25 feet in height. The bark is smooth, of an ash color. The flowers put forth in the spring before the foliage, and are of a dark maroon, single bell-shaped, resembling the flower of the calicanthus, with this difference, that the ends of the petals are turned outward. They generally put forth from the stems solitary, sometimes, though not often, in branches, and hang down gracefully, which gives the bush a very pretty appearance when in full bloom.

The leaf is a rich green, from 8 to 12 inches in length, smaller in the middle, and tapering to a graceful point at each end. The fruit is smooth skinned, from 4 to 10 inches in length, resembling a cucumber in shape. Some are straight, others a little curved, rounding off bluntly at the ends. It sometimes grows single, sometimes in bunches, the seeds resembling in size and shape the Lima Bean, covered with a brown husk like the chesnut, are arranged crosswise in the pulp, and are set about one inch apart. When ripening, the skin turns yellow; some are most fond of it at this season; but the fruit is in its greatest perfection to my taste after a few heavy frosts, which change the skin to nearly black. The pulp is of an orange color, and of a mealy delicious flavor, and I can compare it to nothing better than a rich custard.

E. CARPENTER.

For the American Agriculturist.

MIDDLETOWN, O. June, 1842.

GENTS.—In consideration of the gratification afforded me by the perusal of your valuable journal, I feel obligated to furnish you an occasional contribution for its columns, should it not be the means of excluding matter of greater importance to your readers.

I propose at this time, to offer some remarks on the subject of electrical conductors, as a means of protection to life and property. It will not be presumed compatible with the design of a journal of this character, that I should enter into a lengthy philosophical disquisition of the subject, and I shall confine my observations to such as may be of practical utility. My humble object will have been fully attained if I can be effective in rendering harmless, an element, which at the same time that it is an important agent in performing the functions of animal and vegetable life, is occasionally so terribly destructive to both.

A conductor should be constructed of square bar iron, three-fourths of an inch thick, in pieces five feet in length, with one end turned at a right angle, six inches in length and drawn out to a fine point; and the other end have an eye turned upon it, of sufficient size to receive the point of the piece below, thereby completing the connexion of the different parts. The corners of the bar should be hacked with a cold chisel, at intervals of two inches. I say *square bar iron*, because the angles operate as an innumerable combination of points, and experiment has proven, that the electric fluid will be attracted from a greater distance, and more powerfully than by a round bar.

The lower extremity of the rod should be flattened to the distance of eighteen inches, split into three pieces, drawn to a fine point, and embedded three feet below the surface of the ground, and extended at a right angle, six or eight feet from the building, which it is designed to protect. Dry earth is an imperfect conductor; consequently the lower portion of the rod should be surrounded by some substance capable of absorbing and retaining moisture, that the fluid thereby, may when attracted, diffuse itself freely and rapidly in the surrounding earth. Charcoal is one of the best materials that can be employed for this purpose.

The upper extremity of the rod may be terminated by a single fine point, which will be amply sufficient. An objection has been made with some appearance of plausibility, to a number of points, lest they should produce an explosion of electric fluid, when once brought within the sphere of their attraction. Various metals, such as steel, platina, copper, &c, are used for constructing these points, but perhaps none are more effectual than soft iron, which may be coated with gold leaf or not, as fancy may dictate. The coating is not an essential requisite, as experiment proves satisfactorily that oxidation does not impair the attracting property materially.

---

[*] Can any of our readers inform us whether this delicate wild fruit exists in the New England states, or in fact on any of the primitive formations of American soils? We have gathered it as far north as 43° on the banks of the Niagara river, but in the short summers that prevail there, the fruit is inferior in size and never attains the delicate flavor that characterises it in more southern regions. Where known as indigenous, it is well wor- of being transplanted to our gardens, combining as it does utility and beauty.

Francis Cleveland, Esq., of Portsmouth, Ohio, when at his beautiful farm last November, showed us a single bunch of the Pawpaw, numbering fourteen in the cluster, which is the highest number we ever heard growing together. We brought away one of them as a trophy, and have reserved it for the inspection of the curious.

The conductor should be elevated according to the following principle, viz, that a conductor will effectually protect an area of four times the diameter that it extends, above any other point of attraction. For example. Suppose the extreme point of the rod to be ten feet above the chimney tops, it would secure a building forty feet square.

A matter of much importance is a proper method of attaching conductors to the buildings, which may be accomplished in the following manner. Take a sufficient number of pieces of well seasoned wood of the following dimensions; fifteen inches long, four inches wide, and two inches thick, with a hole through one end for the transmission of the rod. These should be well boiled in linseed oil, thoroughly baked in an oven, and covered with several coats of copal varnish, which will render them perfect nonconductors. They may be secured to the building, by removing a portion of a brick and driving them into the wall. Large buildings should have a conductor erected at each extremity.

Conductors should not be-painted or varnished, and to make "assurance doubly sure," may be surrounded with pieces of glass, where they pass through the supports. Yours, &c.

Andrew Campbell, M. D.

The suggestions of our esteemed correspondent are valuable, especially at this season, when thunder showers are frequent, and the humid gases from the newly secured crops, renders barns peculiarly liable to injury. He has well stated the important influence of Copal Varnish as a non-conductor, as the Shellac which is a principal ingredient of it, is the first in the list of non-conductors. Coating the electral points with gold is preferable to the naked iron, for not only is it a better conductor than iron, but in addition it is never subject to oxidation. Recent experiments show that electricity is conveyed in proportion to the extent of surface of the conducting agent, and consequently a number of wires slightly twisted or confined together, afford a more extensive escape for the fluid than a single rod. We subjoin a list of the best conductors in the order of their respective conducting powers: 1 copper, 2 silver, 3 gold, 4 iron, 5 tin, 6 lead, 7 zinc, 8 platina, 9 charcoal, 10 plumbago (black lead), 11 strong acids, 12 soot and lamp-black, 13 metallic ores, 14 metallic oxides, 15 diluted acids, 16 saline solutions, 17 animal fluids, 18 sea water, 19 water, 20 ice above 0°, 21 living vegetables, 22 living animals, 23 flame, 24 smoke, 25 vapor and humid gases, 26 salts, 27 rarefied air, 28 dry earths, 26 massive minerals.

The non-conductors in their order are: 1 shellac, 2 amber, 3 resins, 4 sulphur, 5 wax, 6 asphaltum, 7 glass and all vitrified bodies, including diamond and crystalized transparent minerals, 8 raw silk, 9 bleached silk, 10 dyed silk, 11 wool, hair and feathers, 12 dry gases, 13 dry paper, parchment and leather, 13 baked wood and dried vegetables, 15 porcelain, 16 marble, 17 massive minerals not metallic, 18 camphor, 19 india rubber, 20 dry chalk and lime, 21 phosphorus, 22 ice below 0°, 23 oils, the densest being the best, 24 dry metallic oxides. Ed

---

For the American Agriculturist,

New Orleans, May 8th, 1842.

Gentlemen:—In answer to your inquiries concerning the Herba Hispania, the grass of Cuba and the grape which I have growing on my estate, I will as a memorandum only, give you a hasty sketch.

The Herba Hispania is an Italian grass. Its value in a soft, sandy soil, I learn from Dr. Cartwright of Natchez, is worth one ton per month per acre during the growing months, and he is of opinion in our latitude its vegetation would never cease.

The grass of Cuba which I have growing on the sea shore, my daughter brought from Cuba adhering to the root of a Banana plant. It has spread over a large surface, and by pulling off the tops or leaves of the grass, and setting it in the earth or sand, it has spread over a considerable surface of the white sand of the sea shore. It delights in a dry arid sandy land (if I may be allowed to call such, land,) and grows with great rapidity. The more firmly pressed the more rapid the extension. The sward soon becomes about 3 inches high, and as thick as the growth of wool, and if a dime is dropped in it—it is very doubtful if it may be found again, as my own losses fully prove. The Plaster of Paris seems to have a very happy influence upon it, and I should suppose that the lands of New Jersey would with this grass make very fine sheep walks.

The grape I obtained from the vicinity of the Fort, built by the French, who came to the sands of Biloxi some 120 years ago, when invited by the Mississippi scheme got up by Law, the great financier and humbugger of Paris. I have no doubt, it is the grape from which that rich Burgundy was made in days bygone, and of which so much has been written. The vine has somewhat of a rough bark, is of very rapid growth, the most prolific bearer that I have ever seen, and of the largest branches. The grape itself is smaller than the Madeira, perhaps not more than half the size, as closely jutted together as a painting, and more resembles in appearance the figure of a bunch of grapes than any idea that I can express. The colour of the fruit is purple, ripens equally throughout the bunch, and is so juicy dripping, that when eating, you are in constant apprehension of injuring your clothes. The great superiority of their grape over all others that I have seen, is its full bearing, perfect fruit and delightful flavor. Upon the sea shore, immediately exposed to saline moisture and unprotected from the breeze, I was advised by those who lived in Florida, that I should certainly not succeed in my efforts to rear grapes, That they would ripen imperfectly, and that many would be faulty. I have found the reverse, and now upon one of my vines, not three years old, I have fifteen hundred bunches, every one of which promises to be perfect. The dry rot which affects all other grapes has never yet made its appearance upon a single bunch. Excuse this hasty scrawl, and if upon perusal any thing may suggest itself, I will take a pleasure in a leisure moment to answer you more fully and satisfactorily, in haste yours

W. H. Tegarden.

We regret exceedingly when at New Orleans, that we could not have accepted Doct. Tegarden's polite invitation, and accompanied him to his plantation on the route to Mobile, and visited his grass fields and grapery and many other things, that we should have doubtless found there besides well worthy attention. We shall look for fnrther communications from him on southern poducts with interest.

For the American Agriculturist.

Llangollen, Ky., May 20th, 1842.

Gents:—There are many precepts and practices in Agriculture, which are thought to be of modern date, which were inculcated and adopted even before the Christian era. In this antediluvian age, it has become fashionable to neglect classical literature, especially with those who are totally unacquainted with it, and consequently incapable of appreciating it. And the young people receiving their impression from such, think that in reading the ancient classics they would acquire no useful knowledge, but merely *the words* of a dead language, which like dead capital, would remain useless to them. They think it would be throwing away their time to learn even Latin, while they waste more time than would be necessary to acquire it, in reading the trashy works of fiction with which the periodical press inundates the country. Very few even read translations from ancient authors. They either complain that they are *too dry*, or assert that more instruction can be obtained from modern works on the same subjects, or from others of greater utility—*practical utility*, that is the cant term, I believe. But on enquiring, you will find that they have never read, or do not understand these vaunted works. By your leave I propose to show that this anti-classical heresy is the cause of much ignorance even in Agriculture, the most utilitarian of all human pursuits. Much agricultural knowledge is to be had from the perusal of Virgil's Georgics alone. Knowledge too, that is thought to be the fruit of modern discovery. All this is *clear gain* to those who read the Roman language, either to discipline the mind by intellectual exercise of the most invigorating kind, or to acquire that etymological instrument which enables them to read and understand our own language, and all those of southern Europe, in the shortest time, and with the greatest advantages.

It is true that modern Chemistry, Vegetable Physiology, and Mechanical science have given us a better knowledge of the elements, of the constitution of plants and their mode of existence, better agricultural instruments and machines than the Roman cultivator of the soil possessed. And we may by the aid of induction, have arrived at some mediate and secondary causes which he never reached. We may have ceased to doubt in many cases in which he if now living, would still doubt, I do not say whether wisely or not; still he had much practical knowledge, derived from experience, which modern science *has only confirmed*, but which modern ignorance attributes to modern discovery. It has not even been vamped up by us. This I will now proceed to show from the original. The first important precept relates to Ploughing. This was known to be the prime operation in preparing the soil for all crops—the time and mode of great consequence; hence Virgil gives them the first place. Georgica, Lib. I linea 42.

*Vere novo gelidus, etc.** "In early Spring when melted snows glide down the hoary hills, and the crumbling glebe unbinds itself by the zephyrs;"

Observe the qualification and caution in the last line, when the mouldering clod falls to pieces—not when the furrow slice turns over unbroken and without *re-solution.*

At prius ignotum ferro, etc. "But before we cut an unknown plain with the coulter, let it be our care to learn the winds and various quality of the climate, the ways of culture practised by our forefathers, and the genius and habits of the soil."

Not a furrow is to be run before the *climate*, *nature of the soil*, and *previous modes of its cultivation* have been *carefully* ascertained.

Et quid quæque ferat regio, etc. "What each country is apt to produce, and what to refuse." What more on the adaptation of different soils and climates to different productions, do we find in any modern book, than is here compressed into a single line? The deep and early ploughing of stiff, argillaceous land, and the later and lighter ploughing of siliceous, sandy or granitic poor soils, and the rotation of crops are insisted on by the Poet. Even the kind of crops in the rotation is expressly mentioned—the very best known even now. *Pingue solum primis*, etc. "Let your sturdy steers turn up a soil that is rich forthwith, from the first months of the year:" *At si non fuerit*, etc. "But if the land be not fertile, it will be sufficient to raise it up with a light furrow, even so late as towards the rising of Arcturus.† You will likewise suffer your lands after reaping to rest every other year, and the field to harden and be overgrown with scurf. Or changing the seasons, you will sow there yellow wheat, whence before, you have taken up a joyful crop of pulse, with rattling pods, or the vetch's slender offspring, and the bitter Lupine's brittle stalks." The exhausting effects of flax, oats, &c., are alluded to. *Urit enim lini*, etc. "For a crop of Flax, burns the land, as also oats and poppies." No greater advocate of abundant manuring than Virgil, is to be found in China or in Flanders, much less in England or the United States.

Ne saturare fimo, etc. "Be not backward to saturate the parched soil with rich dung." And Liebig has lately taught us scientifically, only what the Roman husbandman knew experimentally of the value of *Ashes on exhausted lands.* The latter it is true knew nothing of the Silicate of Potash, or that it is a constituent of those plants which alkalies enter. Yet he availed himself of its use and inculcates it on others.

Effœtos cinerum, etc. "Or to scatter sordid ashes upon the exhausted lands." The burning of stubble on sterile fields, and the theories popular in that day as to its modus operandi, are mentioned; cross ploughing, harrowing and dragging hurdles in the preparation of lands for wheat. Thorough pulverization and cultivation only, can ensure the smiles of Ceres, the goddess of the golden grain. On him her gifts she showers.

Qui exercet frequens tellurem. "Gives it frequent exercise, and rules his lands imperiously." Draining, irrigation, the feeding down of too luxuriant grain, and the right time, the protection of crops from birds, &c, the injurious effects of weeds and shade, are all mentioned. The medication of seeds, before sowing, with nitre, and the lees of oil too. Have we any better preparation even now?

Et nitro prius, etc. "I have seen many sowers artificially prepare their seeds, and *steep them first in nitre and black lees of oil.*" Stealing a march on grass and weeds by hastening the germination of seeds before planting, by soaking them in tepid water was practised even more than at present, although so labor-saving a practice, especially in gardening, and with root crops. The selection of the *best seeds* with the view of improving the quality and increasing the quantity was deemed all important. *Et quamvis*, etc. "And though to precipitate them, they were soaked over a slow fire, selected long and proved with much labor, yet have I seen them degenerate, unless human industry with the hand culled out the largest every year." The necessity of counteracting the constant tendency to degeneration is illustrated by a figure of great force and beauty. *Non aliter*, etc. "*Not otherwise than he who rows his boat with much ado against the stream —if by chauce he slackens his arms*," &c. Orchards, vineyards, meadows, bees, stock of all kinds are treated with ability. Even the arrangement of trees in the Quadremium and Quincunx is taught. Need I multiply instances? Is not my position proved? If the classics, instead of Bulwer and Co. were read, depend upon it Sirs, we should have young men of better discipline and stronger minds, more capable of reasoning and judging than the *mustachioed* Miss Molleys, who infest both town and country. *Nati cosumere fruges*, on a level with pug-dogs and pet monkeys.

Very truly Sirs, your obedient serv't.,
John Lewis.

---

* We insert a literal translation for the benefit of those of our readers who may not be familiar with the Latin tongue.

† About the middle of September.

For the American Agriculturist.

Farm Buildings.

Next to good soil, and enclosures, nothing is more important to a well managed farm or plantation than good buildings. No matter what the climate be, if any where above 36° of north latitude, *good shelter* for beast, as well as man, is a most important requisite. Without shelter the farm crops are liable to destruction, and domestic animals to casuality, disease, and oftentimes death. Deprived of it, the farmer of the south, and lower Mississippi valley, may get along with his *stock* tolerably well, but those of the northern and middle states cannot dispense with barns and outbuildings short of an annual loss of at least twenty to fifty per cent., on their actual cost and repairs. They are in fact an item so indispensable to *good* husbandry that an essay of some pages on the subject may not seem inappropriate in a paper aiming to encourage all permanent improvement in the agriculture of our country.

Farm buildings may be divided into two classes: the useful and the ornamental. With the latter I have at present nothing to do. Their discussion may be deferred to a more fitting season of relaxation and amusement. *Utility* is my present object. Of useful erections there are two kinds; the dwelling, for the accommodation of the farmer himself, his tenants, or laborers; and the outbuildings, for the storage of farm crops, tools, machinery, accommodation of the cattle, and other stock, &c, &c. And as these latter are of the greatest importance with all *good* farmers, after the family is *comfortably* housed, I shall first treat of their structure, and as incidental thereto, and to their uses, make some remarks on the proper care of stock in general.

In the outset, it is as well to remark that in America where the *basis* of our agriculture is directly the reverse of what it is in the countries of Europe. There land being dear and labor cheap, while here land is cheap and labor dear, the least possible sum that can be expended in the manual labor of the farm *consistent with a productive result*, is, or should be the main study of the successful farmer. The American farmer who annually pays larger *labor* bills grows poor, while the European who does not expend much labor on a comparatively small farm usually grows poor also; and it should therefore be the aim of the American to make all his permanent expenditures which are to constitute the *dead* capital of his farm with an eye not only to cheapness in construction, but to the saving of labor in its use. No *general* rule of building can be laid down for a country so diversified in climate and material as in North America: but main hints and outlines may be given to govern the ordinary construction of outbuildings for thrifty husbandmen. As a general proposition, however, the buildings should be of wood, well framed, and covered with boards and shingles, and well set up from the ground, either on a stone walled cellar, or underpinning; usually the latter, for but few barns or outbuildings require much cellar room. But every building should be well set up from the ground, and on an *indestructible* foundation, that being truly, as well as literally the basis of all real economy in this department. As to their location, that depends so much on circumstances; the shape, locality, the purposes to which the farm is devoted, and many minor considerations, that the good sense and discretion of the proprietor must decide that question. Were I to locate my buildings on the farm, proximity to the road would have little influence on my choice. Access to good water, a central position on the farm, by which every part of it might be easily reached in getting in the crops and in superintending the labor, would be the main object; whle the passing on the highways and the neighborhood gossip would be the last requisites I should consult. Your true Southerner, and Pennsylvanian, and South Western farmer nestles down simply in a convenient spot on his estate; let the travelled highway go where it may, and there he awaits the call of the public, attending solely to his own domestic affairs, content to see what comes upon him, hieing out from his domicil when occasion demands it; while your inquiring Yankee as universally plants himself on the main road, determined to see every thing as it passes, and dreading nothing so much as to be shut out from the gaze of the passer by, and not to know as it occurs, every thing of public import as well as of private rumor. I once knew a characteristic, yet perhaps rather extreme instance of this propensity to building every thing on the highway, in a worthy old gentleman, long since deceased, in New England. He was a considerable farmer, but a great talker and story teller; and in constructing his buildings set his house, woodhouse, &c. on one side of a road not over forty feet wide, and on the very side of it too; while his barn, sheds, corn-house, and even his well, barn-yard, &c. were directly opposite, and on the exact line of the road also. True, his farm lay on both sides of it, but not in equal proportions—this to be sure was a mighty inconvenient method of placing his buildings, having to cross the road, often a muddy one, for every bucket of water; but it enabled the family to see every body that passed, and was, as the old gentleman one time remarked to me, "handy to hear the news and know what was going on in the world." So absorbing had this propensity become in his old age that he had a shaving horse under a great buttonwood tree on the road-side near his house for several years before he died, where in warm weather he could sit and shave shingles a great part of the day, and have a friendly gossip with almost every traveller who came along and would loiter time enough to hear a story from the old gentleman. Ah, well! he was an excellent man; and although he had his buildings altogether too near the road, I wish that every body was as good and as virtuous as he. There were no rail roads in those days, and people were not wont to hurry through the world on their travels in such chain-shot expedition as they now do, going over more ground than they even see, and with a rapidity that seems like the shadowy remembrance of a dream.

But the yankee has some contrivances to counterbalance his roadside propensities satisfactory to himself, no doubt; and as I do not propose to reform the inherent or conventional habits of the people, I have only to do with the structure and uses of their buildings, and to these I return.

Assuming that the farmer has his estate well cleared, and in condition to receive the necessary buildings for its accommodation, they should consist of whatever is required to protect its crops, and shelter the stock from the inclemency of the seasons, as well as for feeding purposes. These usually are, a granary or corn house, or cribs, or both; wagon and tool house, work-shop, &c, a barn with sheds appended, to the requisite extent. To these may be added a milk, or cheese room, piggery, &c, &c, as the business of the farm may require. The location of all these may be a matter of taste or fancy with the proprietor; but they should be convenient to the house, and at such distances and points as to be easily reached, and rapidly inspected. They may, or may not be built adjoining each other, as convenience requires. Their immediate proximity will more endanger them from fire by communication than if built apart in groups; but in all cases the barn and cattle sheds, sheep fold and stock buildings should stand detached and at a reasonable distance from the dwelling and smaller buildings, that in any emergency they should be out of danger from each other by conflagration. The wood-house, and milk and dairy rooms should, and usually are appended to the dwelling; and the piggery or hog pen, if not a large establishment, should not be at a great distance, as that usually receives the wash of the house. In this last should always be a cooking establishment, in the Northern states, for the greatest economy of fattening pork. In its rear ought to be a comfortable yard for the hogs to range at proper seasons. Of the fashion of this building one may indulge in many varieties, but I would suggest the general plan of a main entrance at the gable end by a hall running through its entire length, with the stalls or pens on each side, and the swill or feeding troughs next the passage. These preparations save great time and labor in feeding, and promote quiet and repose in the animal, without which no creature will thrive rapidly.

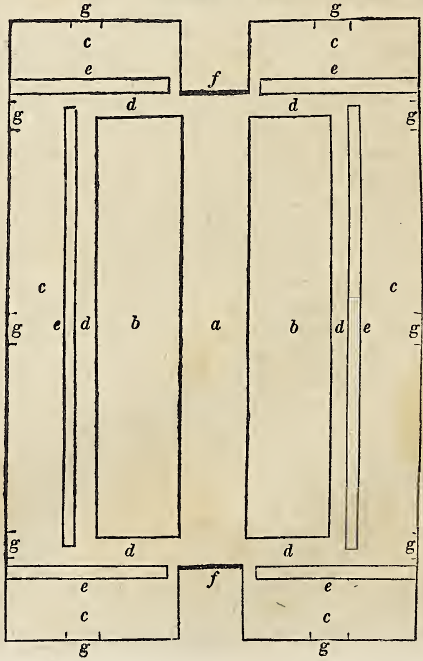
This building should be at least twenty feet in width, to admit stalls on each side of the passage, or hall, and any length required for the number of swine to be fattened. The height too may be as great as fancy or convenience may demand. Over head, corn or other grain, or various farm products may be stored, and the room thus acquired will always be valuable.

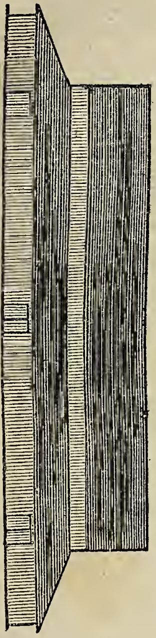
In addition to the other buildings, every farmer should have a work-shop, with a carpenter's bench and vice in it, and a tolerable set of tools with which to repair and construct various implements as his ingenuity or wants may suggest. It will save many dollars annually to his expense account, besides employing many otherwise idle or unprofitable hours in amusing and useful labor. A small forge and bellows may be added, with an anvil, and a few blacksmith tools. These frequently come handy in the necessities of the farm, and I have often known excellent farmers who had also acquired a tolerable blacksmith's and carpenter's trade by merely attempting to patch up their own implements of the farm or plantation. This class of buildings may be always cheaply constructed at a mere nominal expense.

The barn and sheds, however, are the main structures for the farm. *These are indispensable in all economical husbandry.* Although the stacking of hay and grain is largely practiced in some parts of the United States where the winters are mild, yet in such localities as will afford buildings at moderate expense, the policy of a general out-door storage may well be questioned. Great and indispensable waste both of labor and crop, is the certain consequence. To this must be added loss by disease in animals, to say nothing of the toil and vexation incident to those having the ownership and charge of the farm products and stock. From my own observation of many years, I am thoroughly satisfied that the annual loss of grain, cattle feed, and flesh by casualty, &c, cannot be less than twenty-five per cent. greater than what is sustained in the same material where ample buildings for these purposes are in use, to say nothing of the quietude and comfort experienced both by man and beast; and the outlay of five hundred to one thousand dollars on a farm of one to three hundred acres, on which the interest, with the depreciation may be fairly estimated at ten per cent. can hardly be better appropriated. It is very true that many farmers strongly oppose winter shelter for either stock or fodder. Every thing is stored out of doors; and unless the food can be strewed over an open field, or in a filthy yard, where the suffering and quarrelsome animals can drive each other over it, trampling it into the mire, eating a small portion, and destroying the residue, they consider it a departure from the *old plan*, and an innovation not to be tolerated. To a skilful husbandman, and one who admires neatness and system, this practice will be sufficiently condemned. There is, however, one exception to out-door feeding which is not only excusable, but highly to be commended in certain cases. In meadows worn down by neglect, or on barren knolls, in localities where snows and hard frosts prevail through the winter, hay or other fodder may be stacked, and while the frosts prevent the ground from poaching by the tread of the cattle, they may be driven to these stacks and fed with the hay, straw or stalks scattered about the field. In clear cold weather the stock will eat their food tolerably clean and the manure left after them, if scattered in early spring with the dung beetle, will be of the greatest service to the land as a top dressing. This plan too, is a saving of labor, when *properly* done, but it should never be pursued on *soft* grounds, and in rainy or violently snowy weather. But even in these cases, it is questionable whether a sort of crib made of four upright pieces of scantling, each four feet long, set upright, with three boards of six or eight inches in width, ten, twelve, or fifteen feet long, and some four feet wide strongly put together with nails, the end of the posts projecting above the boards or bars, six or eight inches at top and at bottom, so as to stand either side up, and movable by merely capsizing, would not be much better than the scattering method—I think they would—for by this latter way the food is confined within the crib out of reach of the feet of the animals, and is accessible either from over the top, or through the spaces of the boards forming the sides and ends. These articles are also of great convenience in barn yards, where hay or straw is fed, and the cattle kept in open sheds, and may be used for all kinds of stock alike. They are easily transported to any part of the farm, may be readily thrown together in piles under the shed, and thus preserved many years. They are cheap—cheaper indeed than racks, and much better too, for racks admit great waste by drawing the fodder through the gratings. Young stock, store cows and oxen, &c. will winter sufficiently well in open yards with comfortable sheds; but all *choice* animals, milch cows, laboring oxen, fatting cattle, &c, should each be accommodated with a warm comfortable stable, well secured in the stall with each a separate manger of its own, where they may be fed more or less, and cared for in a proper manner. Considerable experience has entirely convinced me of the superiority of thus arranging the feeding of stock. Those fed in stalls, where they enjoy perfect quiet, will thrive on less food than others in the open fields will grow poor upon, each being in the same condition when driven into winter quarters. If a creature be ailing, due care and nursing may be given it, when if running at large with the herd, it could receive little or no attention, and great loss of flesh, if not death would be the consequence. By the stabling system also, no loss at all of *valuable* food need occur, as all can be saved and fed to some sort of stock or other. In a large stock, I am aware that the stabling system cannot be economically extended to *all;* but the *sheltering* system can, and it should be adopted by every systematic and careful husbandman. These remarks have been sufficiently extended, and I now proceed to the

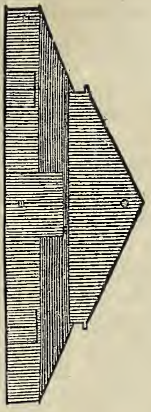
Plan of a Barn.—The ground plan must depend something upon the position where it is to be located. If on a side hill, it may have an under ground room, or cellar, or stables. This however, is generally very expensive, and only resorted to for some especial purpose, or to gratify a peculiar taste or convenience. My plan is that of *utility* solely: to obtain the greatest possible profit at the least expense. I therefore propose that for the greatest convenience it be placed on either elevated ground where the drainings from it can be carried on to the adjoining cultivated fields, or on a gentle slope having the same advantages. Ample cellar room for storing roots and other soft crops is not only convenient, but almost indispensable, and may be made beneath a part of the barn, or under an adjoining building; but wherever it be, it should be sufficiently drained, and thoroughly guarded from frost. In the year 1835, finding it necessary to erect several barns on sundry tracts of improved land, after much study and observation, I adopted a plan dissimilar from any that I had yet seen, and comprising, as I thought, more convenience, saving of labor and economy in storage, than any other plan. Two of them are one hundred feet long and fifty feet wide in the main upright parts, and the third, fifty feet long and forty feet wide. They were all upon the same plan essentially, and I here give that of one of them figured and described in a letter to Judge Buel in the year 1835.

Ground Plan.





Upright—Side View.



Upright—End View.

Explanation.

a. Barn floor, 14 feet wide.
b. b. Bays for hay and grain, 18 feet wide and 92 feet long.
c. c. Stables for cattle and horses, 13 feet wide in the clear.
d. d. Passages to stables, 4 feet wide.
e. e. Mangers for feeding, 2½ feet wide.
f. f. Great doors, 14 feet wide.
g. g. Stable doors, 5 feet wide, double.

Length of Barn,	100 feet.	
Width of do.	50 do.	
Posts of do.	18 do.	
Pitch of roof,	12½ feet.	
Height of leanto posts,	7 feet.	
Pitch of stable roof,	8 feet.	
Length of side leantos,	100 feet.	
do. end do.	38 do.	

The barn is framed as if to stand alone, omitting the lower girt at the ends on each side of the large doors. The leantos are then framed on the barn in the simplest manner—the passage being *round* the main body of the barn, excepting at the ends, where the passage is *in* the main barn, and the leantos there only 16 feet wide, and the manger is fitted up to the main barn. Only one passage is made to go into the short stables at the ends. Stalls are made seven and a half feet wide and boarded between, and each ox or cow is tied next to the partition side of the stall, which prevents their getting together, and saves much room. The doors are sufficiently wide to drive in a pair of oxen yoked, and large spikes are driven in the plates all round the stables to hang harness, yokes and chains upon.

The bottoms of the mangers are raised ten inches from the floor, and laid double. The sides of the stable are also battened with thin boards, inside, which makes them perfectly tight and warm; windows with sliding shutters are made in the sides, to throw out the manure.

Girts run parallel with the main floor in the posts, across which are laid poles, nine feet above the floor, on which hay or grain can be piled up to the peak.

This barn will hold 200 tons of hay and 46 yoke of oxen, or 100 cows or horses. If only ordinary stock is kept, the *long* leantos need be only 18 feet wide, and the *short* ones 14 feet. Granaries can be partitioned off from the bays or stables as may be convenient. If a thrashing machine is used, a part of the stable can accommodate it. Its whole expense, finished complete, is about $1,500.

On this model, barns of any size may be built, and I am well satisfied that, according to the room required, it is altogether the *cheapest* in cost and simplest in construction of any plan I have seen. If a less proportion of stable room be needed, it may be omitted where convenient.

The passages around the ends of the bays and in front of the mangers, are for feeding the cattle, every thing being put in front of them. The passages are wide enough to carry hay, and when the bay is partially fed out, the hay may be thrown directly into the passages.

I would on no account, store hay or other material over the cattle, under the stable roofs, although there is considerable room, as I am satisfied from experience, that there is not too much space left for ventilation.

The floors are lined with thin refuse boards, excepting a part of the stables, it being my wish that *nothing be lost.*

This barn is placed on level ground, having no side hill convenient on which to place it.

This, it is true, is on a larger scale than is needed for an ordinary farm; yet many farms require as much and a larger quantity of barn room. If every thing be saved and housed that can be profitably expended in the feeding of stock, much more shelter is required than is supposed. If the farm be small, the size of the barns should be graduated to its wants. This plan has been closely examined by many farmers of great experience, and pronounced to be the best they have seen. The utmost possible economy of room is made for packing the hay and grain, and the stables are mere leantos, made of light frame, attached to the sides and ends of the main building. If wood covering for either the sides or roof of boards and shingles are not to be obtained, they may be made of thatch. The bodies of the building may even be laid up of logs and covered with slabs, so that they be well chinked and comfortable. It is true that there is some waste room over the cattle in the stables, but no more than is wanted for ventilation and to pass off the respired air, which is deleterious to their health. The letting in of fresh air in cold and stormy weather, through the sides of the building, gives them colds and disease, to which they are as liable as the human family. But even if only sheds are wanted, I am satisfied that they are better to be attached to the sides of the barn in the way these stables are, than in any other, being more convenient, and allowing the stock to be fed in them with greater economy. The stables attached to this being for the accommodation of working cattle mostly, are wider than need be for an ordinary stock, and may be made narrower. But among all other plans, I have found none which combine the requisites of cheapness, economy of feeding, and storage like this. It has withal an appearance of snugness and comfort about it that greatly embellishes the farm.

If, however, it be preferred, the posts of the stables may be raised to nine, ten, or twelve feet in height; it will give room for considerable cheap storage of straw for bedding, or coarse fodder for the stock. In ordinary cases, the two end doors of the stable in the side view can be omitted, as one, the centre door, is sufficient. Open sheds, if wanted in addition, can be extended from either side of the leantos or stables to any length required for shelter to the out-door stock. One of these barns has three long sheds attached for this purpose. There is another advantage in attaching cheap stables to the sides or ends of the main barn which is seldom thought of. The stale and droppings from the different animals, by saturating the lower timbers of the frame, cause early decay, and in a few years, if within the body of the structure, it requires new sills, sleepers, &c.; but in this plan, they may be replaced and the barn itself remain in sound condition. The stables also being made of lighter timber, will cost less than in the other way, and in the long run prove much less expensive. These barns have now been built, and in constant use for nearly seven years, and are pronounced by those having the immediate care of the stock and farm products, and who have used them for the storage of grain, &c. (and a great quantity has been stored in them,) superior to any plan they have ever known. One active man, with a boy to assist in cleaning out the stables, will tend a hundred head of cattle in the stables of this barn above figured; or two men will easily take care of this 100 head, and another 100 in the yards and sheds. About ninety neat cattle have been wintered at one of them the past season; half of their number, choice blood stock, and nothing but hay and straw fed them. Thorough-bred Short Horns, several of which went into winter quarters in low condition, have gained in flesh, and are now going into the spring pastures in as high condition as is desirable. In relation to the barn yard, every precaution should be taken to prevent wasting the deposites within it, and as I hold it to be the best plan in most cases to remove the manure as early in the spring as practicable for application to the farm crops, little waste need accrue by evaporation or drainage. I have said little of sheep or horses in connection with the barn and its appendages; but if these animals, as they usually do, form a part of the farm stock, the horses need only have appropriated to them the same space or privileges as is given to the neat cattle; and the sheep may be either fed in separately enclosed yards and sheds, or in such exclusive appropriations as they require. The general plan may still remain the same. These barns together with some others since erected, are still under my charge, and one of them being built of logs 40 by 36 feet, several years since, by the then occupant of the farm, essentially after the same model, with stables, &c, and in a very cheap way, still answers an admirable purpose. Another was built principally for the storage of grain crops in the straw, without stables, 60 by 45 feet; but all the occupants concur in opinion that the original plan, for all purposes, is preferable. The saving of labor in the barn duties, *a great item*, is admitted to be very important.

In regard to the watering of farm stock, somewhat different opinions prevail among good farmers and herdsmen. Some insist that water should constantly flow into a trough in the yard, where practicable, by pipes from a neighboring spring or stream; while others prefer to drive their animals some little distance for their water, thus giving them that exercise so conducive to full health which they would not take when the water is within the yard. From my own experience, each method has its advantages. For *milch* cows, and for them only, would I care for a fountain in the yard. Often drinking may assist in an increased degree, the secretion of milk, although I fancy that green roots during the winter given daily, in addition to their hay or straw, will be much more efficient agents in this matter; but for the necessary purposes of deglutination, or of moistening the food, the use of water once or twice a day during the foddering season, is abundantly sufficient. Working animals require drink at least twice, or three times a day. During the past winter, and up to this time, our own stock have had water but *once* a day, being turned out of the stables and yard about ten o'clock, A. M., after feeding all they required of dry food. Their water, in abundant quantity from the Niagara river, is within a dozen rods of the yard. They then proceed leisurely to the spot and spend some time in sipping and drinking, which they do heartily; after which, they leisurely return to the yard; and although in the early part of the winter driven again to the stream before night, refused to drink again. Finding that one watering was sufficient, no more has been given to them, and a healthier, finer wintered stock of cattle I have never seen. Not a sick day has accrued to a single one of them, nor a loss of any kind, while several of the cows have given milk and suckled calves during a part, or through the whole winter; these last, however, have had a little extra feed. This method of watering I have some years practised, and with uniform success. A year and a half since, I had some fine Short Horn stock procured from a distance late in the fall which were in low condition, and as I wished to give them some extra care, kept them at my own residence instead of sending to the farm with the other stock. In the stable yard is a water-butt constantly supplied with pure spring water where they could drink at any time; but after taking in their morning draught, which they did in large quantity after leaving the stables, they seldom repeated it during the day, or noticed it in any manner. No animals enjoyed higher health, and they were regularly salted every week; and as the hay was very poor, they were fed each a peck or more of wheat bran daily, which might perhaps increase their desire for water. I know of but one disadvantage attending the distant mode of watering: it is that of partially or wholly losing the droppings of the cattle while at the watering place. This, to be sure, is a loss to some extent, but it is perhaps as little as can be suffered in any other way. Some farmers, and good ones too, build small hay barns which stand scattered about their fields contiguous to springs or water courses, for storing hay as it is cut, from which it is fed out in winter, and the cattle driven to them for that purpose. This is better than stacking, as the hay is sheltered from damage; but the cattle are exposed to the inclemency of the cold and storms of our northern winters; and the manure, unless scattered by the dung beetle in early spring, is very much lost in its good effects to the soil, and the method as a general rule is not to be recommended. These things, however, must depend in their economy, on circumstances. The proprietor must take all matters into consideration and arrange his buildings and plans according to the climate, situation, and capacity of his farm.

In connection with this subject, I may be excused for remarking something upon the necessity of curing hay and other fodder in the best possible manner. It costs no more to do these things well than ill, and no remark is required on the great superiority of good and proper food for anything requiring it. In all coarse, or offal stock feed, the cutting-box is required to prepare it for *close* consumption. Its use, however, is both laborious and expensive, and in an ordinary farming country where winter forage is not extraordinarily dear, it need not be resorted to, unless for working animals occasionally. Where economy demands the use of machinery on the farm; and by *economy* I mean the saving of *expense* in achieving any kind of productive result; it should be provided if possible; but in ordinary stock feeding, the only requisites—*simplicity* and *despatch*,—the uses of the pitchfork and rake are most in demand. The labors of the hay and harvest fields are much the most critical, hurried, and severe of any others on the farm, and unless seasonably performed, irrecoverable loss is the consequence; hence the greatest attention is required for their due performance, and the closest economy should be practised in the consumption of their products in the barn and farm yard. But from the negligent and wasteful manner that is often witnessed among our farmers, one might readily suppose that they were of no moment, and required in their expenditure neither thought nor consideration.

I ought, perhaps, before now to have brought this, I fear too prolix essay, to a close; but its importance must be my apology for its length. I have not the vanity to say that the buildings and the plans I propose are the *very best* that can be suggested. I only say, that seven years experience has convinced me that, taken all together, they are the cheapest in construction for the room afforded, and the easiest in the demand upon labor, that I have yet met with; and were I now to build again on like premises, I should not make a single alteration in the *principle* of their construction. I hope the coming summer to have them all as well filled as at any time before, for I can assure you that no sight is more grateful to me than a spacious barn almost bursting with the fruits of a well toiled harvest, and a noble herd of animals near at hand to do ample justice to its abundance through a coming winter: thus consuming the forage of the farm, and returning to its soil valuable treasures of fertilizing stimulants; and yielding in their product, their increase, and their flesh a valuable profit to the intelligent and pains-taking husbandman.

I shall make some remarks on the barn yard, the manure heaps, and the granary, in my next.

Black Rock, April 1842. L. F. A.

Magnesian Limestone.

There is no little controversy going on at the present moment among our Pennsylvania farmers, as to the effect of Magnesia, when it occurs in connexion with Limestone in the state of carbonate, and with it is deprived of its carbonic acid, and in this condition is applied to land. To elucidate this matter, and give some general principles on this subject, we subjoin a valuable extract from Professor Johnston.

1°. *Carbonate of Magnesia* is a tasteless earthy compound, which in some parts of the world forms rocky masses and veins of considerable height and thickness. It occurs more largely however, in connection with carbonate of lime in the magnesian limestones, so well known in the eastern and northern parts of England,—and in similar rocks, distinguished by the name of *dolomites* or of dolomitic limestones, in various countries of Europe. The pure, exceedingly light, white magnesia of the shops, is partly extracted from the magnesian limestone, and partly from the mother liquor of the salt pans, which generally contains much magnesia.

When pure and dry, carbonate of magnesia consists of 43⅓ of magnesia, and 51⅔ of carbonic acid. It dissolves readily in diluted acids (sulphuric, muriatic, or acetic), the carbonic acid at the same time escaping with effervescence.

Existing as it does in many solid rocks, this carbonate of magnesia may be expected to be present in the soil, and is found in the ashes of many plants. Of the ashes of some parts of plants it constitutes one-sixth of the entire weight.

When exposed to the air in a finely divided state, it gradually absorbs a quantity of moisture from the atmosphere, equal to two-thirds of its own weight. In this state, it dissolves in 48 times its weight of water, though, when dry, it is nearly insoluble. Like carbonate of lime it is also soluble in water impregnated with carbonic acid, but in a somewhat greater degree. In this state of solution, it may be readily carried into the roots, and be the means of supplying to the parts of living vegetables, a portion of that magnesia which is necessary to their perfect growth.

Soils containing much of this carbonate of magnesia, are said to be highly absorbent of moisture, and to this cause is ascribed the coldness of such soils. This opinion is, however, open to doubt.

2°. *Magnesia or Caustic Magnesia, the calcined magnesia of the shops.*—When the carbonate of magnesia is heated to redness in the open air, it parts with its carbonic acid much more readily than lime does, and is brought into the state of pure or caustic magnesia. In this state it does not occur in nature but is occasionally met in combination with about 30 per cent of water. When magnesian limestones or dolomites are burned, the quick-lime obtained often contains caustic magnesia also in considerable quantity. This mixture is frequently applied to the land, and, as is well known in many parts of England, with injurious effects, if laid on in too large quantities. The cause of this hot or burning nature, as it is called, of magnesian lime, is not very satisfactorily ascertained. I shall, however, state two or three facts, which may assist in conducting us to the true cause.

1°. Quick-lime dissolves in 750 times its weight of water, at the ordinary temperature of the atmosphere, while pure magnesia requires 5142 times its weight. The magnesia therefore, is not likely to injure living plants *directly* by entering into their roots in its *caustic* state, since lime which is 7 times more soluble produces no injurious effect.

2°. It seems to be the result of experience, that magnesia in the state of carbonate is but slightly injurious to the land; some deny that in this state it has any injurious effect at all. This I fear is doubtful; we may infer however, with some degree of probability, that it is from some property possessed by magnesia in the caustic state, and not possessed, or at least in an equal degree, either by *quick-lime* or by carbonate of magnesia, that its evil influence is chiefly to be ascribed.

3°. When exposed to the air, quick-lime speedily absorbs water and carbonic acid from the air, forming first a *hydrate** in fine powder, and then a carbonate. Caustic magnesia absorbs both of these more slowly than lime does, and in the presence of the latter, or when mixed with it, must absorb them more slowly still, since the lime will seize on the greater portion of the moisture and carbonic acid which exists in the air, immediately surrounding both. When slaked in the air also, the lime may be transformed in great part into carbonate while the magnesia still remains in the state of hydrate, and it is a property of this hydrate to attract carbonic acid more feebly and slowly, even than the newly burned magnesia as it comes from the kiln. Hence when buried in the soil, after the lime has become nearly all transformed into carbonate, the magnesia may still be all either in the dry caustic state, or in that of a hydrate only.

4°. Now there exist in the soil, and probably are exuded from the living roots, various *acid* substances, both of organic and inorganic origin, which it is one of the functions of lime, when applied to the land, to combine with and render innoxious. But these acid compounds unite rather with the caustic magnesia, than with the lime which is already in combination with carbonic acid—and form *salts*[*] which generally are *much more soluble in water* than the compounds of lime, with the same acids. Hence the water that goes to the roots, reaches them more or less loaded with magnesia salts, and carries into the vegetable circulation more magnesia than is consistent with the healthy growth of the plant.

---

* Compounds of substances with water are called *hydrates* (from the Greek word for water). Thus slaked lime, a compound of lime with water, is called *hydrate of lime*—and the native compound of magnesia with water, alluded to in the text, is called *hydrate of magnesia.*

It is hazardous to reason from the phenomena of animal to those of vegetable physiology, yet if lime and magnesia have the power of differently affecting the animal economy, why may they not also very differently affect the vegetable economy? And since in the same circumstances, and in combination with the substances they meet with in the same soils, magnesia is capable of entering more largely into a plant by its roots—may not magnesia be considered capable of poisoning a plant, when lime in the same condition would only improve the soil?

I have said that it may be doubted whether magnesia in the state of carbonate is wholly unhurtful to the land. This doubt rests on the fact that the magnesia *retains* its carbonic acid more feebly than lime does—and therefore its carbonate is the more easily decomposed when an acid body comes in contact with both. Though, therefore, the magnesian carbonate will not lay hold of all acid matter so readily and surely as caustic magnesia may, still occasions may occur where acid matters being abundant in the soil, so much carbonate of magnesia may be decomposed and dissolved as to render the water absorbed by its roots destructive to the health or life of a plant.

In reference to this point, however, it must be distinctly understood, that magnesia is one of the kinds of inorganic food most necessary to plants, that a certain quantity of it in the soil is absolutely necessary to the growth of nearly all cultivated plants, and that it is only when it is conveyed to the roots in too large a quantity, that it proves injurious to vegetable life.

5°. *Sulphate of Magnesia*—the common Epsom salts of the shops—is formed by dissolving carbonate of magnesia in diluted sulphuric acid. It exists in nearly all soils which are formed from, or are situated in, the neighbourhood of rocks containing magnesia. In some soils it is so abundant that in dry weather it forms a white efflorescence on the surface. This has been observed to take place in Bohemia Hungary, and parts of Germany, and it may be frequently seen in warm summer weather in the neighbourhood of Durham.

This salt has been found by Sprengel to act upon vegetation precisely in the same way as gypsum does, and on the same kind of plants. It must be used, however in smaller quantity, owing to its great solubility. Its higher price will prevent its ever being *substituted* for gypsum, as a top-dressing for clover, &c., but it is worth the trial, whether corn plants, the grain of which contains much magnesia, might not be benefited by the application of a small quantity of this sulphate—along with such other substances as are capable of yielding the remaining constituents which compose the inorganic matter of the grain.

CULTIVATION OF WHEAT.—I this autumn tried an experiment on wheat sowing: our crops of wheat in this district are very apt in our clay soils on the banks of the Forth called Carie, to be thrown out in spring, by alternate nights of frost and days of sunshine, whereby the roots, if the plants are not entirely destroyed, are so injured that to support nature the plant puts out side shoots, and there being no firm hold of the ground, becomes what in England is called root-fallen, and lodges long before the grain is ripe, thereby producing grain of an inferior quality as well as quantity. To endeavour to get the better of these faults, I tried what drilling my wheat as beans are drilled in our carns would do. I sowed my wheat by a plough drawn by two horses five or six inches deep, and covered it with the next furrow at ten or eleven inches breadth. I never harrowed it after sowing, and horse's foot never trod on it. The wheat was covered by the deepest part of the furrow; and to my surprize and that of my neighbours, the wheat thus sown and covered came up sooner than wheat sown the same day in the common broadcast way on some adjacent ground of similar quality, and the fallow treated exactly the same as to ploughing, liming, &c, through the summer. As it is well known that wheat prefers a stiff soil to a loose one, I attributed the rapidity of growth to the stiff soil suiting the wheat more than the loose broadcast, for it not only came sooner, but kept the start it got, and now, after heavy rains and frost, looks better, the ground not being run together and battered with the winter rains, as the broadcast wheat is; and having examined it during severe frosts, I found that the roots of the plant had not suffered by it, whilst that sown broadcast had. The roots of the drilled wheat were actually considerably longer, than the broadcast sown the same day; I have, therefore little doubt that I shall most probably have a standing crop of wheat in place of a lodged one, or at least not so soon lodged, and that I shall escape the root failing from the spring frost. It is well known that in England an instrument called the presser is used in light soils to firm the ground, and also that sheep are often pastured or driven over it for that purpose. Another advantage of this plan of sowing is, that all trouble and time of harrowing is saved; and if sudden rain comes on, the sowing is stopped at once, without the risk of being half drowned; the ground is also much more cloddy in winter, thus affording shelter to the young plants, and an excellent cover for grass seeds, if sown in a dry, bleak, frosty morning, without harrowing, by the decomposition and falling down or mouldering of the ground as the day advances, and the effects of the sun are felt on it. My experiment extended over two fields, comprehending about twenty acres; and I harrowed part of the one field and I think the part unharrowed looks better than the harrowed: however, time will show which has succeeded best. I was thrice stopped by rain during the sowing, but as I said above, felt no inconvenience from it. I shall be happy to hear any observations from yourself or correspondents. Perhaps it is no novelty, the experiment I have made; but in this part of the country drilling of wheat in the common way, and sowing eight or nine drills at a time, and then harrowing, is common enough, and I frequently do it myself; but to drill it by ploughing down five or six inches, as I have described, has not been tried before, and most people thought it was so deep it might be long of appearing. Indeed, some thought it would never appear, but none were prepared for the more rapid vegetation than the broadcast, nor for its keeping the start it took at first and which I impute entirely to the firm soil in which it was planted suiting the grain better than the loose. My drill machine is fixed between the stilts of the plough, and one horse is sufficient, the same man ploughing and sowing, and no harrowing being required considerable labour is saved. As to the crop, that cannot be determined till harvest, but I am satisfied with the experiment so far as it has gone.—*London Farmers Mag.*

---

[*] Compounds of the *bases*,—potash, soda, lime, magnesia, &c.,—with *acids*,—sulphuric, muriatic, nitric, acetic (or vinegar), &c.,—are called salts.

FATTENING CATTLE.—I found to fatten a pair of good oxen at Ville Auburn, would take forty-five cart-loads of raves and a ton of hay. When the raves were done they give ground corn, with water enough added to form a paste; this they leave four or five days to become sour, and then dilute it with water, thicken it with cut chaff, and give it to the oxen thrice a day.

At Bassie, the same. They assert that oxen like it better for being sour, and that it answers better in fattening them. They eat about a bushel a day, weighing twenty two-pounds, and never give this and liquor without chopped hay.

The droves I met coming to Paris, to the amount of twelve or fifteen hundred, were with few exceptions very fat—fatter than oxen are commonly seen in England in the spring. I handled many scores of them, and found them well fatted.

At Limogen the same process, but with the addition of a *leaven* to the paste, to quicken the fermentation and make it quite sour. At first the oxen will not drink it, but they are starved to it; they usually take it the second day, and after they have begun like it much, and never leave a drop.

Between Brice and Cressenne they use maize, and to make them fatten sooner and better they give them every night, and sometimes in a morning, a ball of pork-grease as large as an apple. It increases the appetite, and the beasts perfectly devour their food after it, and their coats become smooth and shining. All here give salt plentifully.—*Pott's Cyclopædia.*

AGRICULTURAL ADVANCEMENT.—The great auxiliary of the Flemish farmer is the urine tank, wherein are collected not only the urine of cows and horses, but also the draining of the dung-hills. The urine tanks are generally sunk below the level of the ground, and have the sides built of brick, and the bottom paved: they are of various dimensions, according to the number of cows and horses on the farm. Attached to the distilleries where many beasts are constantly kept to consume the refusewash, there are very large urine tanks of an oblong shape, divided by partitions into different chambers, so that the liquor may be of the proper age when it is used, which some farmers think ought to be six months. Each chamber is about eight feet square and six or eight feet deep: these are sometimes vaulted over, but frequently only covered with loose boards. As urine and the emptyings of privies are sold wholesale and retail, there are many large tanks near the rivers and canals, where the dealers have sometimes great quantities in store. Some of these consist of many square pits like tan-pits, bricked round, and the inside covered with cement, which prevents loss by filtration. There is generally in a corner of each pit a graduated scale by which the number of barrels, or tons of liquid in the tank may be ascertained by observing the height of the surface. These tanks are generally filled by boat loads brought from the large towns; and when the season arrives for sowing, in spring and autumn, the farmers come with their carts and tubs, and purchase as much as they may want. The price varies from three to five francs (56 to 93 cts.) per hogshead, according to the quality. In a small farm of thirty to forty acres the tank is generally about twenty feet long, twelve wide, and six deep, with a partition in the middle, and arched over, leaving an opening for the pump, and another sufficient to allow a man to go in to empty out the earthy deposit which falls to the bottom. A trap door shuts over this aperture, to prevent accidents. Sometimes the tank is round like a well, with a domed top, and so deep in the ground that it has a foot or two of earth over it. The situation of the tank is either in the farm-yard near the entrance of the cow-house, or immediately behind it; sometimes it is like a cellar under the building, but this is apt to cause a disagreeable smell in the cow-house. We here describe those which we consider the most convenient: the form and capacity of the tanks vary greatly according to the means and notions of the proprietors of the farms, but a tank of some kind or other is considered as an appendage indispensable to a farm as a barn or cow-house. The farmer would as soon think of dispensing with his plough as with his tank: and no expense or trouble is spared to keep this well supplied. The numerous towns and villages in Flanders afford great help in the way of manure. The thrifty housewife and her active substitute, the maid, know the value of what in our households is thrown away or wasted and lost. A small tank, or a tub, sunk in the ground in some corner, contains all the liquid which can in any way be useful, soap-suds, washing of dishes, &c, are carefully kept in this reservoir, until, once a week, the farmer or contractor calls with his tub on a cart; and this, mixed with the contents of privies, which are frequently emptied, he keeps in large cisterns for use or sale.—*Flemish Husbandry.*

Breaking Horses.—Some 30 years ago there was an Irish groom called "the Whisperer," who had the skill of subduing the most unmanageable horse. His plan was to be closely shut up with the animal, when he pretended *to whisper* to him, and after being "at *confession*" about 30 minutes, he would lead out the horse perfectly subdued. Some almost incredible examples are related of his success. He would never communicate the secret of his art, and it died with him. It is probably detailed below by our intelligent countryman, Catlin. Its success has been satisfactorily tested in some instances among *civilized* horses, since its publication.

"I have often, in concurrence with a well-known custom of the country, held my hand over the eyes of the calf, and breathed a few strong breaths into the nostrils; after which I have, with my hunting companions, rode several miles into our encampment, with the little prisoner busily following the heels of my horse the whole way, as closely and affectionately as its instinct would attach it to the company of its dam. This is one of the most extraordinary things that I have met with in the habits of this wild country; and although I had often heard of it, and felt unable exactly to believe it, I am now willing to bear testimony to the fact, from the numerous instances which I have witnessed since I came into the country. During the time that I resided at this post, in the spring of the year, on my way up the river, I assisted (in numerous hunts of the buffalo, with the Fur Company's men), in bringing in, in the above manner, several of these little prisoners, which sometimes followed for 5 or 6 miles close to our horses' heels, and even into the Fur Company's fort, and into the stable where our horses were led. In this way, before I left for the head waters of the Missouri, I think we had collected about a dozen. In the same way the wild horses are tamed. When the Indian has got him well secured with the lasso, and a pair of hobbles on his feet, he gradually advances, until he is able to place his hand on the animal's nose, and over his eyes, and at length to breathe in its nostrils, when it soon becomes docile and conquered; so that he has little more to do than to remove the hobbles from his feet, and lead or ride it into camp."

Use of Carrots and Parsnips for Horses.—Can any of our readers inform us whether the injurious effect detailed in the following extract from Quayles Agriculture, have ever been realised in this country? The liberal use of salt would, we have no doubt, prevent this effect partially or wholly.

"Horses eat this root greedily, but in this island it is never given them, as it is alleged that when on this food their eyes are injured." Again, in the island of Guernsey, he says:—"To horses, parsnips are frequently given, and have the property of making them sleek and fat; but in working, they are observed to sweat profusely. If new, and cut sufficiently small, no other ill effect results, except indeed, at one period of the year, towards the close of February, when the root begins to shoot; if then given, both horses and horned cattle are subject, on this food, to an inflammation in the eyes, and epiphora, or weeping; in some subjects perhaps producing blindness."

Protection of Cotton from the Louse.—Lewis M. Garrett, of Madison co. in our State, in a communication to the Agriculturist of Nashville, says that the best way to prevent the depredations of lice on cotton is to leave balks between the ridges, to grow up in grass and weeds, and remain unploughed until the cotton is advanced beyond danger, or the louse has disappeared.

His theory on the subject is this: The louse will prey upon any thing juicy and green as well as upon cotton—and by leaving plenty of weeds, &c, between the rows to amuse the hungry insect, his attention will be divided and the cotton be less molested. If on the other hand the field is broke up, and every green thing removed except the few stalks of cotton left to make the stand, (as is the common practice) those stalks being all that is left for their food the whole army of depredators will at once attack.

Mr. Garrett also recommends that the cotton should not be too closely *thinned*, as by leaving more stalks for the louse to prey on, the few you want for the stand will have a better chance to escape.

The notions of Mr G. seems very reasonable and correct, and experiments on his advice are certainly worth trial. We can add our own recollections on the subject, which favor the same views. Some years ago it was the common practice in planting cotton, to throw up a ridge of four furrows, leaving balks of grass and weeds, as Mr. G. advises, to be ploughed out after the cotton was scraped; and at that period, suffering from the louse was not heard of among our planters. This system has now however been thrown aside as slovenly, and we now every year, have more or less complaints of ice.

VALUABLE HINTS ON BUTTER MAKING AND PACKING.—"Solidity and firmness, I think, is of more consequence than is generally allowed; the nearer butter can be made of the consistency of wax, the longer it will keep its flavour; and as it is not so easily acted upon by the atmospheric air, it will retain less salt or brine, being divested more effectually of the buttermilk, consequently will be less disposed to acidity.

"To accomplish this object I recommend salting the cream by putting rather more fine table salt to it than is used when applied after churning, because a part will be left with the buttermilk; or, use strong clean brine, the produce of the salt generally used, and mix with the cream or butter, the hand to be used in the making as little as possible, (the earlier the butter is made, and the cooler the dairy the better—the latter should be washed out with salt and water the first and last thing every day.) The hand relaxes the texture of the butter; it might by a little practice be avoided altogether by using wooden pats (the same as used by the London cheesemongers) for putting into casks, or making into shape for sale, which will press out the whey effectually by beating. These pats must be always, (except when in the hand for use) kept in a tub of fresh cold water, which will prevent the adhering of the butter and keep them cool.

"The quantity of salt or brine required, will in some degree depend on the season of the year, the distance to be sent, and time to be kept. Brine is preferable to salt, as the butter is smoother and better flavored. If salt be used, it may be in the proportion of half an ounce of dry table salt mixed with two drachms of fine saltpetre, and two drachms of fine yellow dry Jamaica sugar, to every pound of butter. If the butter be made up in lumps for the market, I would recommend that every lump be wrapped round with a piece of calico soaked in brine made from fine dry salt, that will carry an egg; if the brine be weak and watery it may be injurious. If the butter be put into a firkin or half-firkin, the cask should be made of white oak, ash, or sycamore, or beech (the whiter the wood and hoops the better it pleases the eye,) well seasoned by scalding out several times with hot brine made from pure and clean salt. It should be well bound and made water tight, with head and bottom groved; three pounds should be allowed for soakage.

"If very choice butter, I would recommend a salt cloth around the butter, also on the top and at the bottom; the cloth can be kept in its place by a hoop, which can be removed as the cask fills; in either case the cloths can be returned or sold to the buyer, as many of the cheesemongers use cloth instead of paper in sending out the butter to the consumer.

"Much observation, attention, and arrangement is required to see and judge as to what improvement can be effected in the make of butter; comparative statements from different dairies at different times—the temperament of the milk and cream in the different stages—the situation and state of the dairy—the quantity and quality of cream the milk will yield in different localities, under different management—the effects of the use of various sorts of salt, brine, sugar, honey, or saltpetre, mixed with the milk, the cream, or the butter—the effect of mixing different milks together—the effect of heat and acid applied in churning; the best sort of colouring, if any and what description of food has such effect, the effect of dry, wet or shady pasture, also of regular exercise for the cows, if any, and what effect as the production of cream in proportion to the milk given by the cows, if feeding on corn or grain, or by adding meal in the water for drink." WILLIAM WERE.

Mr. Burke also stated that in many parts of Holland the brine was added, not to the butter itself, but to the cream from which it was to be obtained; and that he believed honey to be preferable to sugar as an addition for improving its quality. *Roy. Ag. Soc. Trs.*

NEW CLOVER.—Two new clovers have been attracting attention in France. One is the Hybrid, and the other the Elegant. Elegant clover was for some time considered identical with one called T. hybridum, cultivated in Sweden; when, however, growing together, the differences are striking; the latter is larger in all parts than the former, and the colour of its flowers is a brighter rose, shaded with white in the centre, while the Elegant trefoil has rather dull reddish rose blossoms, coloured alike in every part of the flower-head. The appearance of the herbage is different; the Hybrid clover has bright and dark foliage, and that of the Elegant is pale and unequal; the leaflets of the latter are also marked with a brown band like common clover, which is not the case with the hybrid. Another character of the Hybrid is, that in summer, when it begins to shed its blossom, and during the autumn, the root throws out fresh foliage, arranged like a rosette; but in the Elegant trefoil this does not occur; it is the lateral branches which rest on the ground that supply the verdure. The Elegant trefoil is found in abundance on poor clayey strong soils, where it grows thick and vigorous; it is wild in France in many places, not unfrequently in ferruginous sand. It is more than probable that both the species will one day form valuable additions to our forage plants, as they appear as though they would succeed on land unsuitable for clover, lucern, and sainfoin. *Bon Jardinier.*

SUGGESTIONS FOR AGRICULTURAL SOCIETIES.—I propose making it conditional that no male animal shall be allowed to compete for a prize without producing a certificate that during the past year he has served such a fair proportion of females as may be fixed on.

Also I would suggest that instead of a premium being given commonly to the fattest animal exhibited, a strict enquiry should be made as to the expense of bringing it into that fatted state, and decided by a preference given to that animal or breed which has acquired the best condition on the poorest cheapest fare. It can be of no value to the generality of our farmers who look for their subsistence to the profits derived from their farms by judicious economy, to know that the wealthy expend a sum in preparing their stock for shows, double its value when ready for exhibition; on the contrary, the really valuable gift to our nation would be those animals arriving at a state of perfection at the smallest expense, and such only ought to obtain premiums.

But to be brief. With regard to prizes, I would place a new, earlier, more prolific, better kind of grain, capable of being grown on inferior soils, as first of importance, since on grain depends the lives of nine-tenths of our immense population; and let it not be forgotten that one bushel of increased produce in grain over every arable acre in Britain would add 1,200,000 quarters annually to the present average of our corn crops. What object then deserves really the greatest encouragement?

The second place should be assigned to new superior roots, grasses, or any kind of vegetable food.

Superior ploughs, a perfect dibbler, or other implements, capable of performing the various operations necessary for tillage best, and at least expense, should decidedly in justice stand third —for their benefits would be felt speedily all over the country.

As to deciding by the necessarily brief trials at our annual shows, the thing is impossible; but let our Society call on the many willing to devote their time and talents to this most important object, and there will be no want of hundreds ready to form a committee perfectly competent to decide the question, at furthest within six months from their appointment.

Discoveries of new and valuable economical manures, the destruction of the wire worm, turnip fly, grub, and remedies for the many other evils which afflict the best agriculturists, should come next, and not yield in importance to the all-absorbing premiums for animals which ought to stand fourth; though I fear that old habits and prejudice will yet for a while get the better of reason, and give them a higher place than I hope I have succeeded in proving them to deserve.

The principal points of all the best and worst animals exhibited at our shows, should be written out by their judges, and for the information of young agriculturists who attend our shows to acquire instruction, placed as tickets on some conspicuous part of each animal.—*Lon. Far. Mag.*

BOKHARA CLOVER appears to be a variety of Melilotus Arborea, was given me by Mr. Loudon in the spring of 1839. It vegetated freely, and grew most luxuriantly up to the latter part of September, when it was four feet high; it was then mown, and the stalks manufactured into strong and durable hemp. Horses eat the plant with great avidity in its young state; and to judge from the extraordinary growth the first year, it may be fed off three times, namely, the middle of June, July, and August. It stood the winter of 1839-40 well, proving itself to be a hardy plant. On the 28th of April, 1840, a small portion of it was cut, which was then 15 inches high; on the 28th of May again, height 16 inches; and subsequently on the 18th of June, height 17 inches; in August 15 inches, and in September 12 inches; the first flowers appeared in June, and by the middle of July it was covered with its highly fragrant white blossom. A large portion had been left for seed, and towards the end of September the crop was harvested, each plant producing from 10 to 20,000 seeds, the stalks being from 12 to 13 feet in height. From the experiments I have made with Bokhara Clover, I should calculate that an acre would produce from 20 to 30 tons of green herbage. The first year it may be cut in June, July, and August, each cutting averaging three to five tons of green herbage. The second year in April, May, June, July, August and September, each month producing three to five tons of herbage. If intended to be saved for seed, it must not be cut more than three times, in April, May and June. The roots form a sort of manure; and from two to three tons of hemp. Great advantage must be derived from its cultivation, as it forms a valuable green food for all sorts of cattle at an early period of the season; and if cut when 15 or 20 inches high, an abundant crop would be produced, yielding hay superior in quality and quantity to the common herbage plants. To judge from what has hitherto been seen of the Bokhara Clover, it appears to be a valuable biennial plant, well adapted for growth in this country; nor is it unlikely that it may be found to thrive on such soils as, by agriculturists, are termed clover-sick; whereby its value would be greatly enhanced. Should it, as may reasonably be expected, in ordinary seasons on good soils, be ready for cutting in the early part of April, farmers who have no grass, and but a short supply of hay, carrots, or turnips, would derive essential benefit from it. The Bokhara Clover being a tall, deep-rooted plant, with a strong stem well clothed with foliage and blossom, it keeps the ground in a more perfect state than most other plants of the artificial grass kind, and consequently will be more influential in ameliorating and preparing the soils for the reception of wheat crops. It is a plant capable of being cultivated with success and advantage on almost all heavy and dry descriptions of land if in a tolerable state of fertility; and it may be sown from March till June. The proportion of seed that is necessary must vary according to the quality of the land and the state of preparation to which it has been brought; on the richer descriptions of soil that are free from weeds, 8

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.--*Washington.*

Vol. I. New-York, August, 1842. No. 5.

A. B. Allen, and R. L. Allen, Editors. Saxton & Miles, Publishers, 205 Broadway.

" THE AMERICAN AGRICULTURIST"
will be published Monthly, each number to contain thirty two pages royal octavo.

Terms.--One Dollar per annum, payable strictly in advance.

Six Copies will be sent for $5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside.

Twenty five Copies will be sent for $20, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, post paid, No. 205 Broadway, New-York.

☞ **Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

The American Institute.

The charter for the incorporation of this valuable institution, was granted by the Legislature of the State of New York, to be located in this city, May 2, 1829. Its objects, as recited in the act of incorporation, were "for the purpose of encouraging and promoting domestic industry in this state and the United States, in agriculture, commerce, manufactures, and the arts, and any improvements made therein, by bestowing rewards and other benefits on those who shall make any such improvements, or excel in any of the said branches, and by such other ways and means as shall appear to be most expedient." A noble object truly, and how well carried out by those interested with its management, the long file of records of its transactions, and the united testimony of the community who have participated in its benefits, will amply show. In the incipient stages of its existence, its influence was limited, from the want of efficient organization, and such an amount of pecuniary means as were essential to its success. But after its more thorough organization, a plan of operations was matured and adopted, which, with the aid of more extended pecuniary contributions, have enabled the competent and devoted men who have directed its efforts, to realise, in no inconsiderable degree, the benefits anticipated from its creation. These benefits have been two-fold; 1st, the collection of information on the various subjects embraced in its charter, for the purpose of disseminating it abroad over the community, through all the means available for this object; by a well selected and extensive library, by popular discussions and lectures, but principally by the aid of the press, which has been made the vehicle of spreading throughout the United States, a vast amount of the most important facts connected with the best interests of every citizen, in the various reports and addresses from committees that have, from time to time, been appointed for this purpose; and 2nd, the excitement of a laudable competition through its annual fairs, which, in collecting a great number and variety of the best specimens in every occupation both of nature and art, have stimulated to an incredible extent, the development of American industry, skill, and resources. These fairs are got up in the most liberal, attractive, and efficient form. In the midst of a city containing more than one-third of a million of active and intelligent citizens, the commercial emporium of the United States, accessible to its remotest borders by its direct channels of communication, the ocean, navigable rivers, canals and rail roads, and the resort of intelligence and enterprise from every quarter of the globe, these annual exhibitions have displayed the congregated products of the best portion of a Hemisphere. Every arrangement that could add effect and interest to this exhibition have been provided. The most ample and convenient room has been afforded, and a refined and elegant taste has given to them order, beauty, and attraction, by the nice adjustment and harmonious grouping of the varied productions of the husbandman, the artisan, the manufacturer, and the artist. The beneficial effects that have resulted from these exhibitions, and which are yet to be developed in their progressive influence, cannot be estimated. They have excited the indolent, they have enlightened the ignorant, they have rewarded the meritorious, and they have cheered the hopes of every lover of his country who has witnessed them.

We have but few of the data of the transactions of the Institute before us; but from these we learn, that the aggregate receipts for the last seven years have been $51,920 96, all of which has been rigidly applied to promote the objects of its existence. Of this large amount, nearly all has been the contribution from private and individual liberality, a small portion only having been appropriated by the Legislature of the State. The greater part of this sum has been required for the large expenditures for rents, library, printing, and the various disbursements incidental to its operations; leaving but a small amount to be applied as premiums to the successful competitors for its rewards. We subjoin the last in a tabulated form:—

Year.	Gold Medals.	Silver Medals.	Silver Cups	Diplomas.	Vols.	Value.
1835	16	91	00	340	00	$905 40
1836	27	125	00	249	00	1138 00
1837	29	126	00	308	00	1198 30
1838	26	167	00	396	00	1370 04
1839	27	124	13	384	00	1155 44
1840	12	60	18	331	00	842 50
1841	17	118	18	336	26	1172 03
Total,	154	811	49	2344	26	$7781 71

It will be seen, that the total of expenditures for all the objects embraced by the Institute, besides the honorary rewards in diplomas to the number of 2,344, amounts to $7,781 71. But, as our design in calling the attention of our readers to the Institute is strictly connected with the objects of our work, we shall confine ourselves entirely to its agricultural character. We find the Premiums awarded to the agricultural department are—

Year	Gold Medals.	Silver Medals.	Silver Cups.	Diplomas.	Vols.	Value.
1835	1	4	00	17	00	$43 50
1836	3	9	00	28	00	104 00
1837	2	15	00	39	00	110 00
1838	4	21	00	42	00	176 00
1839	6	17	13	70	00	323 24
1840	2	12	18	60	00	332 25
1841	6	31	17	71	26	529 97
Total,	24	109	48	327	26	$1618 96

Although the above amount seems small in comparison with the large sum received, yet in the various disbursements for rents for the accommodation of farming implements, steam-engine for propelling farming and other machinery, printing reports on agricultural subjects, and the incidental expenses connected with this object, nearly one-third of the gross receipts have been expended. As agriculturists, however, and representing by far the most numerous and important branch of the industrial portion of the country, we think we have a right to claim a greater share of the attention and pecuniary means of the Institute. Though receiving its charter and organization from a single State, that one, by universal consent, is *the Empire State.* Its objects have ever been, and, we trust, will ever be, as its name imports, truly and entirely national. Every citizen of this wide-spread Union, has an equal claim to its benefits and rewards. And occupying as it does, in its locality, the commercial centre of the country, we are desirous of seeing it, as it may be, the agricultural centre likewise, to such extent, at least, as a national stamp can be imparted to any agricultural society in a country embracing so widely-diversified climate, productions, and extent. We are desirous of seeing increased efficiency and devotion to this feature in its character, and think we discover in the progressive advancement made in this branch within the last few years, the rapid approximation to our most sanguine wishes.

The amount to be appropriated in agricultural premiums this season, is about $800; while the expenses of fitting up and rents for the various rooms and grounds, will be equal to thrice this amount. We are not satisfied, however, with the meagre lists of animals and products receiving rewards from the Institute; and we hope, before the arrangements for the Fair of the ensuing season are matured, such accessions to its agricultural department will have been received, as to afford the full measure of importance and weight to which it is intrinsically entitled

We annex the agricultural and horticultural lists of premiums, committees (so far as they are completed,) and the rules and arrangements for the coming Fair, which is to be held in this city in October, 1842.

PLOWING MATCH.

The Plowing Match will take place at East New-York, on Long Island, about five miles from the city, on Wednesday, the 12th day of October. For the best Plow, Silver Cup. For the second best Plow, Silver Medal. The following premiums will be awarded for the best Plowing, performed within one hour, on one eighth acre of green sward: Best Plowing, Silver Cup, value 8 dollars. Second Best Plowing, Silver Medal.—Third Best Plowing, Diploma. Jeremiah Johnson, N. Y., Allen Putnam, Mass., P. Schuyler, N. J., Committee on Plows and Plowing.

Exhibition of Pure Blood and Native Cattle.

The Committee have again secured the extensive premises at the junction of Broadway and Union Place, which will be completely arranged with suitable sheds, stalls and pens, for the ample and safe accommodation of the various kinds of stock presented. Messrs. Whitney, Poole, Choules, Schuyler and Clark, the Superintending Committee, will have the entire control of the arrangement of the Cattle Exhibition. Feed of every description will be provided on the ground at the cheapest possible rate, for those who wish to purchase; and as no entrance money for Cattle will be required, and Exhibitors may bring their own feed, the expenses of the occasion will be greatly reduced. Careful and experienced men will be in attendance to assist in taking charge of the animals.

List of Premiums on Cattle.

BULLS.

For the best Bull of an improved breed, 2 years old and upwards—Gold Medal or Silver Cup,	$15 00
For the second best do. of an improved breed, 2 years old and upwards—Silver Medal.	
For the best one year old do. of an improved breed—Silver Cup,	10 00
For the second best do. do.—Silver Medal.	
For the best Bull Calf, do.—Silver Cup,	8 00
For the second best do. do.—Silver Medal.	

COWS.

For the best Cow, of an improved breed, 3 years old and upwards—Gold Medal or Silver Cup,	15 00
For the second best do. of an improved breed, 3 years old and upwards—Silver Medal.	
For the best one year old Heifer—Silver Cup,	10 00
For the second best do.—Silver Medal.	
For the best Heifer Calf—Silver Cup,	8 00
For the second best do.—Medal.	

NATIVE STOCK.

For the best Bull, native breed, 2 years and upwards—Silver Cup, ...	10 00
For the second best do.—Silver Medal	
For the best Bull Calf, do. do.	
For the best Cow, do. three years and upwards—Silver Cup, . . .	10 00
For the second best do. do.—Silver Medal.	
For the best Heifer Calf do.	

WORKING OXEN.

For the best pair of Working Oxen—Gold Medal or Silver Cup, . . .	15 00
For the second best do.—Silver Medal.	
Fat Cattle will receive discretionary premiums.	
For a method of working oxen without the use of the common yoke, which, in the judgment of the Committee, shall be deemed an improvement—Silver Cup, . . .	10 00

SHEEP.

For the best Buck—Silver Cup, . .	8 00
For the second best do.—Silver Medal,	
For the best Ewe—Silver Cup, .	8 00
For the second best do.—Silver Medal.	
For the best Wether, do.	
For the best Lamb, do.	

SWINE.

For the best Boar—Silver Cup, .	8 00
For the second best do.—Diploma.	
For the best Sow—Silver Cup, . .	8 00
For the second best do.—Diploma.	
For the best Shoat, do.	

HORSES.

For the best Stud Horse—Gold Medal or Silver Cup,	15 00
For the second best do.—Silver Medal.	
For the best brood Mare—Gold Medal or Silver Cup, ...	15 00
For the second best do.—Silver Medal.	
For the best Colt, not exceeding 2 years old—Silver Cup, ...	8 00
For the best Jack—Silver Cup, . .	8 00

MULES.

For the best pair of working Mules—Silver Cup,	10 00

REGULATIONS.

1. All entries of Stock must be made, either verbally or in writing, at the office of the Secretary of the American Institute in the Park, rear of the City Hall, on or before Monday, the 17th day of October, with full pedigrees of the animals, their breed, ages, owner's names, &c., and with such observations, as to their food, thrift, constitution, milking or fattening qualities, as they may see fit to append. This is absolutely necessary, that the Secretary may be able to prepare a Catalogue in time for the use of the Examining Committee; and neither the Secretary nor the Committee will be responsible for the omission of any animal on the Catalogue, if this rule is not complied with.

2. All animals must be upon the ground by 9 o'clock, A. M. on Wednesday, Oct. 19, attended by their owners or keepers, for the inspection of the Examining Committee.

3. The Judges upon Stock, will meet at Niblo's Garden at half past 8 o'clock, A. M., of the 19th day of October, to organize and proceed immediately to the discharge of their several duties. On the completion of their awards, the Committees will append to each prize animal a certificate designating the particular premium awarded.

4. No animals can be removed after entry, without the consent of the Superintending Committee.

5. A public sale of pure blood Cattle will take place on Friday, Oct. 21st, at 10 o'clock, A. M. when an auctioneer will be provided at the expense of the Institute, for the disposal of the same, and it is particularly desired that they may be specially designated as for sale on the Catalogue.

6. All animals will be admitted on the ground designated for the exhibition, on the presentation of a Ticket, which the owners or proprietors will obtain from the Secretary at the time of entering the same.

7. The rule in force at former Fairs, of excluding animals which have already taken prizes at the American Institute, is now abolished, and the premiums are now open for competition without reservation.

Judges on Cattle.—Francis Rotch, N. York; L. F. Allen, do.; B. V. French, Mass.; David Haggerson, do.; C. M. Giddings, Ohio.

Judges on Horses.—Charles Henry Hall, N. York; William T. Porter, do; Henry Wheeler, do.

Judges on Swine.—R. L. Allen, N. York; A. De Russey, N. Jersey; William K. Townsend, Conn.

Judges on Sheep.—E. P. Prentice, N. York; John B. Taintor, Conn.; Francis Rotch, Jr. N. York.

Judges on Agricultural Products.—Henry Colman, N. York; Eli Ives, Conn.; Francis Price, N. Jersey.

Judges of Dairy Products.—Luther Tucker, N. York; John E. Hoyt, Conn.; Charles A. Stetson, N. York.

The Committee on Horticulture, in conjunction with the Agricultural Board of the American Institute, have, after mature deliberation, concluded, that as Autumn, (the time of holding the Annual Fair,) is not the most propitious season for an Exhibition of *the choicest specimens of Flowers,* the objects of the Institute will be better promoted, by not confining their premiums to *any select species or varieties,* but to offer inducements to all Horticulturists and Florists, professional and amateur, to furnish daily supplies of the Flowers of the season for the decoration of the Horticultural Rooms; and thus stimulate their fellow citizens in general, to pursue that most healthful and enchanting of all recreations, the cultivation of Flowers.

It is proposed to set apart the second story of the north wing of the Saloon in Niblo's Garden, expressly for the purpose of exhibiting Agricultural and Horticultural productions, and the rooms will be so fitted up, that their contents can be seen by visiters to the best possible advantage, without risk of despoliation. A skilful Gardner will be engaged, to receive and arrange all the field and garden products, such as Vegetables, Grain, Fruit, Flowers, or whatever may be committed to his care, and the Horticultural Committee will be in attendance daily, to superintend that particular department, to see that every contributor to the Horticultural show is fully and fairly represented, by his name being attached in legible and uniform characters to every article he may offer for exhibition, and to record every transaction for the government of the Judges at the time of deciding the premiums, when the quantity as well as the quality of the Flowers furnished will be duly considered, and the names of all contributors to the Ornamental department, entered on the annals of the Institute.

The Board of Managers of the last Annual Fair, having awarded several copies of Agricultural and Horticultural Books, as premiums for superior specimens of Garden and Field productions, and this present Board being of opinion that mental acquirements are the most enduring memorials, have been induced to follow so wise and noble an example. Competitors are hereby assured, that each volume will be embellished with a tablet, containing the name and object for which it was awarded, so as to render it a truly honourable memento, in the following form:

AWARDED BY THE AMERICAN INSTITUTE,
At their Fifteenth Annual Fair, 1842.
To A. B., as a Premium for superior specimens of Garden Products.

All imperishable articles, to be entitled to free privileges, must be delivered to the Clerk of the Fair, entered on the Books, and receipts taken, either on Friday, the 7th, or Saturday, the 8th of October. Ripe Fruits, Delicate Plants, Flowers, &c. may be deferred until the morning of the 10th, provided they are in their places by noon, on which time of the day they must be brought on the succeeding days.

The following Premiums are offered:

FLOWERS.

For the best and greatest display of Green and Hot-house Plants—Silver Medal.

Best and greatest variety of Cut Flowers, from do.—A copy of Downing's Rural Architecture.

Best and most beautiful Bouquet—Silver Medal.

Second best do.—A copy of Downing's Cottage Architecture.

Third best do.—A copy of the American Flower Garden Directory.

Best and greatest display of Dahlias and other Flowers exhibited during the Fair—Silver Cup.

Second best supply of do. do. do.—A Silver Medal.

Third best do. do.—A copy of the American Botanical and Horticultural Magazine.

Fourth best do. do.—A copy of Downing's Cottage Architecture.

Fifth best do. do.—A copy of the American Flower Garden Directory.

Sixth best supply—A copy of Bridgeman's Gardener's Assistant.

Discretionary premiums will be given to any additional articles in this department, which may be deemed by the Committee as entitled to special notice.

Fresh supplies of Flowers will be thankfully received on the morning of each day of the Exhibition.

FRUITS.

For the best and greatest variety of Apples—Silver Medal.

Best six Table Apples—A copy of Kenrick's American Orchardist.

Best six Winter Apples---A copy of Bridgeman's Gardener's Assistant.

Best cultivated Cranberries---A copy of the American Agriculturist.

Best and greatest variety of Grapes---Silver Medal.

Best six bunches of Grapes, (foreign,)---A copy of the United States Farmer.

Best six bunches of Isabella Grapes---A copy of Gray's Practical Agriculture.

Best six bunches of Catawba Grapes---A copy of Johnson's Agricultural Chimistry.

Best six bunches other variety---A volume of the Cultivator.

Best six Nectarines---A copy of Kenrick's American Orchardist.

Best six Peaches, (freestones)---A copy of Bridgeman's Gardener's Assistant.

Best six Peaches, (clingtones,)---A copy of Kenrick's American Orchardist.

Best and greatest variety of Pears---Silver Medal.

Best six Table Pears---A copy of Kenrick's American Orchardist.

Best six Winter Pears---A copy of Bridgeman's Gardener's Assistant.

Best six Plumbs---A Diploma.

Six second best Plumbs---A copy of Downing's Cottage Architecture.

Best six Quinces---A Diploma.

Six second best do.---A copy of Gray's Practical Agriculture.

VEGETABLES.

For the best and greatest variety of Culinary Vegetables---A Silver Medal.

Best and greatest variety of Vegetable Roots for Cattle---A Silver Medal.

Best six Blood Beets---A copy of the American Agriculturist.

Best six Sugar Beets---A copy of the United States Farmer.

Best six Mangel Wurtzel Beets---A copy of Gray's Practical Agriculture.

Best three heads of Cape Broccoli---A copy of Bridgeman's Gardener's Assistant.

Best three heads of Cauliflower---A copy of Buel's Farmer's Companion.

Best six heads of Drumhead Cabbage---A copy of Downing's Rural Architecture

Best six heads of Savoy Cabbage—A copy of Dana's Muck Manual.

Best twelve Carrots for table use---A copy of the American Agriculturalist.

Best twelve Carrots, for cattle---A copy of the United States Farmer.

Best twelve roots of solid Celery---A copy of Johnson's Agricultural Chimistry.

Best three Egg Plants---A copy of Bridgeman's Gardener's Assistant.

Best peck of white Onions---A copy of Buel's Farmer's Companion.

Best peck of silver-skinned Onions---A copy of Dana's Muck Manual.

Best peck of red Onions---A copy of the American Agriculturist.

Best twelve Parsnips, for table use---A copy of Gray's Practical Agriculture.

Best twelve Parsnips, for cattle---A copy of the United States Farmer.

Best peck of Potatoes, for the table---A Diploma.

Second best do. do.---A copy of Johnson's Agricultural Chimistry.

Best peck of Seedling Potatoes---A Diploma.

Second best do. do.---A copy of Buel's Farmer's Companion.

Best peck of Potatoes for cattle---A volume of the Cultivator.

Best three Winter Pumpkins---A volume of the New Genesee Farmer.

Best three Pumpkins for cattle---A Diploma.

Three second best do. do.---A copy of Dana's Muck Manual.

Best twelve roots of Salsify---A copy of Bridgeman's Gardener's Assistant.

Best six Squashes---A copy of the American Agriculturist.

Best half peck of Tomatoes---A copy of the United States Farmer.

Best peck of White Turnips---A copy of Johnson's Agricultural Chimistry.

Best peck of Yellow Turnips---A volume of the Cultivator.

Best peck of Russia Turnips, (Ruta Baga,)---A volume of the New Genesee Farmer.

Discretionary premiums will be given on Agricultural and Horticultural Productions not enumerated in the above list, if deemed worthy by the Committee.

AGRICULTURAL PRODUCTS.

For the best and greatest variety of Indian Corn---Silver Medal.

Best 40 ears of white Indian Corn---Three volumes of the Cultivator.

Best 40 ears of yellow Indian Corn---Three volumes of New Genesee Farmer.

Best bushel of Wheat---Silver Medal.

Best bushel of Rye, do.

Best bushel of Oats---Three volumes of the Cultivator.

Best bushel of Barley---Three volumes of the New Genesee Farmer.

Best bushel of Buckwheat---A copy of Buel's Farmer's Companion.

PRODUCTS OF THE DAIRY.

For the best specimens of Butter, not less than 100 lbs---Silver Cup.

Best specimen of Cheese, not less than 100 lbs.---Silver Cup.

A discretionary premium for second best of each of the above articles.

GARDEN ORNAMENTS, IMPLEMENTS, &c.

For the best Metal Fountain---Silver Medal.

Best Cast Iron Vase, do.

Best specimen of Statuary, suitable for ornamenting gardens---Silver Medal.

Floral Figure, contrived so as to show maps, engravings, &c. say from 5 to 6 feet high---Silver Medal.

Best constructed Sun Dial---A Diploma.

Best Portable Engine, do.

Best Portable Pump for the garden, do.

Best cast-steel Socket Saw, suited to a handle 15 or 20 feet, for trimming trees---A Diploma.

Best cast-steel Scythe, of suitable dimensions, say 2½ feet, for use around ornamental shrubbery---A Diploma.

Discretionary premiums will be given for useful articles, such as FLOWER-POT STANDS, FRUIT BASKETS OR STANDS, GARDEN TOOLS, WIRE WORK for creeping plants, or for flower borders, &c.

PAINTINGS.

For the best Painting of Fruit---Silver Medal.

Best Painting of Flowers do.

Best Painting of Vegetables, do.

The Act of the Legislature of this State of May 5th, 1841, requires that "before any premium shall be delivered, the person claiming the same, or to whom the same may be awarded, shall deliver in writing to the President of the Society, as accurate a description of the process in preparing the soil, including the quantity and quality of manure applied, and in raising the crop, or feeding the animal, as may be, and also of the expense and product of the crop, or of increase in value of the animal, with the view of showing accurately the profit of cultivating the crop, or feeding or fattening the animal."

Trustees of the American Institute.---James Tallmadge, President; Adoniram Chandler, Wm. Inglis, John Travers, Vice Presidents; T. B. Wakeman, Corresponding Secretary; G. J. Leeds, Recording Secretary; Joseph Titcomb, Treasurer.

Agricultural Committee.---Jeremiah Johnson, Brooklyn, L. I.; Chas. Henry Hall, Harlæm, N. Y.; Thos. Addis Emmet, do.; Francis Price, Weehawken, N. J.; Henry Whitney, N. Haven, Conn.; Nicholas Wyckoff, Bushwick, L. I.; Abraham Bell, N. York; John O. Choules, N. York; John A. Pool, N. Brunswick, N. J., Edward Clark, N. York; Thos. Bridgeman, do; E. P. Prentice, Albany, N. Y; Alex. Walsh, Lansingburgh; N. Y.; A. J. Downing, Newburgh, N. Y.; Samuel Stevens, N. York; Samuel Walker, Roxbury, Mass; W. J. Townsend, Astoria, N. Y.; J. C. Thompson, Tompkinsville, S. I.; Isaac M. Phyfe, N. York.

THE NEW YORK STATE AGRICULTURAL SOCIETY will hold its annual fair at the Bull's Head Tavern, adjoining the northern extremity of Albany, commencing Tuesday, the 27th of September next. The first day will be appropriated to the trial and examination of agricultural implements. The 28th and 29th will be devoted to the general exhibition of the above, together with every class of animals, field crops, vegetables, fruits, flowers, butter and cheese, silk, sugar, domestic manufactures, paintings and engravings of domestic animals, &c. &c. The 30th is appointed for the sale of such animals as may be offered for that purpose. The amount appropriated for premiums is about $2,000, and the awarding committees are composed of gentlemen from the different states of the Union, in whose intelligence, good judgment, and character, the public may place entire confidence. The place, arrangements, premiums, &c. we are certain will ensure a full attendance, not only from the citizens of this state, but from all the friends of agriculture in the neighboring states who can find leisure to attend. We think it will be a proud day for the agricultural interests of New York, and we feel grateful, as we think every good citizen ought to feel, to the executive committee, who have so fully carried out the wishes of the members of the society. We have not room for the details of stock and other premiums, but will give them summarily.

	There are 12 premiums for Bulls of every breed from 1 year old and upward, the highest premium being	$20
3	premiums for Bull Calves,*	10
38	do. every breed Cows, Heifers and Calves,	20
8	do. the best pairs of Working Cattle and Steers,	20
3	do. Fat Cattle,	20
3	do. Fat Sheep,	10
7	do. Best Stock Horses,	20
3	do. Breeding Mares and Colts,	20
3	do. 3 year old Mares,	10
3	do. Match Horses,	15
3	do. to the breeders of the best Bull, Cow and Heifer, each	10
4	do. Best Boars, 10 months old and over, highest premium,	10
4	do. Breeding Sows,	20
4	do. for each of the 3 varieties of Long Wool, Middle Wool and Short Wool Bucks, 12 in all, highest premium,	10
4	do. for a pen of 3 ewes each, of all the above varieties, 12 premiums in all,	10
	FARM IMPLEMENTS.	
2	or more premiums on each of the following implements :—Plows, Harrows, Cultivators, Drill Barrows, Threshing Machines, Horse Rakes, Fanning Mills, Ox Yokes, highest premium,	30
12	premiums on Cocoons, reeled and manufactured Silk,	15
2	do. Silk Reels,	10
	DAIRY PRODUCTS.	
5	do. Butter, not less than 80 pounds to each sample,	20
5	do. Cheese, not less thon 100 do. do. do.	20
	CROPS.	
4	do. Best Crop Wheat and Indian Corn, each, not less than one acre,	$15
3	do. Best Crop each of Barley, Rye, Oats, Potatoes, Beets, Ruta Bagas, Carrots and Peas, not less than one acre,	10
4	do. Maple Sugar, 50 lbs. each sample,	15
11	do. will also be awarded on FLOWERS,	5
12	do. do. FRUITS,	5
19	do. do. CULINARY VEGETABLES,	2
15	do. do. Domestic Manufactures,	5
4	do. do. HORTICULTURAL IMPLEMENTS,	10

ESSAYS.

For the best popular Treatise on Agricultural Chemistry,	$100
For the best Essay on Rotation of Crops adapted to this state,	20
For the best do. General Management of the Farm,	20
For the best do. Introduction of New Agricultural Products,	20
For the best do. on the management and application of Manures,	20

ARTISTS.

To the Painter of the best specimens of Original Portraits of Domestic Animals,	A Gold Medal
To the Engraver of the best specimens of Portraits of Domestic Animals on Wood,	A Gold Medal
For the best design for a Diploma for the New-York State Agricultural Society,	A Gold Medal
For the best Plan of Farm House, Barn and Out-Houses,	A Gold Medal
For the best specimens of Floral Painting,	[A Silver Medal.

The design for Diploma to be handed in to L. Tucker, Rec. Sec. July 1, 1842; all the other Designs and Essays and Statements of Field Crops, on or before January 1, 1843.

In addition to the long list above, Committees are authorised to award premiums on almost every product exhibited, either of nature or art, connected with the subjects enumerated, not specified above, if meriting one.

RULES.—All persons intending to exhibit animals must give notice to L. Tucker, Rec. Sec. before 15th September next, and stock must be on the ground before 9 o'clock, 28th.

All Plows must be sent as above previous to August 1st.

All other implements previous to 26th September.

All specimens of Butter, Cheese, Silk, &c. &c. must be sent in early on the 27th.

Statements of field Crops must be made under oath by the owner and two other persons, and the land measured by a sworn surveyor.

Claimants for premiums on Dairy Cows, Butter and Cheese, and Field Crops, must make out an accurate statement of the entire management of each. *This is one of the most important provisions in the exhibition, and we trust the Committees will specify in their reports the breed of each animal, and their peculiar excellencies.*

All premiums will be paid in cash or plate, at the option of the winners.

The premiums for Essays, Artists, and Agricultural Implements, will be open to the United States. All others will be confined to residents of this state who are, or shall become members of the Society, by entering their names and the payment of $1, previous to entering the articles.

We notice in the vol. of Trans. of the N. Y. State Ag. Soc., for 1841, an able and condensed paper on English Agriculture, by John Hannam, Esq., of Yorkshire, which we should like to transfer to our own columns, were we not going over something of the same ground, in a more discursive way, ourselves. We notice his mention of the sale of four young sows, of the Rev. Mr. Higginson, for £75, equal to $90 each; and three, 3 months pigs, for £45, equal to $75 each; and we feel complimented by his assertion, that "Mr. Allen's tour will not diminish the demand," for we had no idea that any movements of ours would be likely to affect the price of such stock in England.

---

* It is to be understood when not otherwise specified, that the figures at the right hand of the column express in dollars, the *highest premium only*.

We saw the above pigs, or stock of the same kind, at the Royal Agricultural Show in Liverpool, and also at the Yorkshire county show; and very beautiful they were, but not equal, as a farmer's hog, to the Berkshire. We also saw most of the other stock Mr. Hannam mentions, but suspect he is mistaken in saying that Mr. Webb had let a South Down ram, to the Duke of Richmond, for 100 gs. We spent some little time at Goodwood, the seat of the Duke, and had this been so, should have doubtless learned the fact. We presume it must have been the Duke of Newcastle that paid the hundred guineas.—See our Tour in England, No. 4, published in our last.

Tour in England. No. 5.

Great Show of the Yorkshire Agricultural Society.—The annual meeting and show of the Agricultural Society for Yorkshire was appointed for the 4th of August, and as we were informed that it would be nearly as well worth seeing as that of the Royal Society at Liverpool, we made our arrangements to attend. London is the great centre of the circle of all things in Great Britian; *from* it, to every point, whether north, east, south, or west, is *down; to* it, from every point of the kingdom, is *up;* it was the pivot of all our movements, our *point d'appuyer*, and one could no more think of making an arrangement in the country, except from hence, than he would of sailing to the moon from any other place than this our poor mundane sphere. We accordingly took our departure once more from this mighty Babylon of the world.

For the accommodation of that part of the public that cares for nothing but getting from one point to another in the quickest possible time we have an eminent idea of railroads; but when one is traveling to see an interesting country, or take his pleasure, they become a regular bore, longer than one of their own dark infernal tunnels, and we have at times almost made up our minds with the renowned Mr. Tony Weller "that the rail is unconstitootional, and an inwaser o' privileges—and as to the ingein—a nasty, wheezin', croaking, gasping, puffin', bustin' monster, always out o' breath, with a shiny green and gold back, like an unpleasant breth in a gas magnifier;—and the sensiblest thing it does, is, ven ther's somethin' in the vay, it sets up that ere frightful scream, vich seems to say, 'Now, here's two hundred and forty passengers in the wery greatest hextremity o' danger, and here's their two hundred and forty screams in vun.'"

In one respect the fields of England present rather an unsightly aspect, from the circumstance that previous to underdraining being much known or practised, of their having been thrown up into beds or lands of about one rod wide, crowning high in the centre, and leaving a kind of open ditch between, to carry off the surplus waters. These beds are of the whole length of the fields, winding and tortuous in shape, and all following the same lines, give an unpleasant monotony to the landscape. Except when set to grass in meadows, where they do not wish to break them up, as fast as underdraining is introduced now, these lands are gradually getting levelled down by the plow, which greatly improves the appearance of the face of the country.

We noticed that most of the hay was put up in long ricks, and the grain in conical stacks, all carefully thatched on the top to keep out the weather. The grain stacks generally stood on four smooth chiseled pyramidal shaped stone blocks about two feet high, with a broad stone cap, which prevents the rats obtaining access to them; and if stones are not convenient to be had for this purpose, pillars of brick about two feet square, with a coping, supplied their place; but the smooth face of the stone is much to be preferred for this purpose. The advantages of stacking grain are here considered fivefold. 1. It saves the expense of barn room. 2. The danger of being destroyed by lightning. 3. It can be reaped and gathered three days sooner, which is of great importance to the husbandman in this wet and changeable climate. 4. Vermin cannot injure it. 5. It produces a plumper finer sample. These are important considerations, and we recommend them for experiment, to the attention of our own extensive grain growers in the southern and western states.

Derbyshire is the most picturesque part of England; it abounds with high broken hills crowned with precipices, brawling streams, and deep vallies, but notwithstanding these, the land is mostly under a high state of cultivation. In its fences it reminded us to some extent of portions of New England, nearly all the estates being enclosed by strong thick walls of cut stone handsomely laid up five or six feet high, the division fences of the fields of hawthorn hedge, which, contrasted with the walls in front, add much to the variety and beauty of the country. As we approached Yorkshire the hills receded, and crossing the branches of the Humber, the country became quite flat, partaking something of the same character as the fens of Lincolnshire on the opposite side, so that we lost little in the way of scenery, by night shutting in an hour or two before our arrival at Hull. As usual upon such occasions, the town was overflowing with strangers, the inns were full and not a bed to be had; but we considered ourselves rather the gainers this time by the circumstance, as we were directed to very agreeable private lodgings, where the good people did their best to make us feel at home and as comfortable as possible.

The show took place the next day on the Dock Green, close adjoining the town, and was conducted on much the same plan as that of the Royal Agricultural Society at Liverpool, save that the proceedings were pretty much all crowded into one day, and if they were not on quite so grand a scale, they were rather more sociable and equally agreeable. Plows, harrows, scarifiers, and other implements were tried in a field a short distance off in the morning, and then the cattle-yard was opened at the reasonable charge of one shilling to the public—gentlemen from foreign countries having a free ticket politely tendered them to this as well as to the dinner. There were full 350 animals present, and in horses, Short Horn cattle, and Long-woolled sheep, the show was decidedly superior to that at Liverpool; but the variety and different breeds of stock were not near as great. There were at least 120 head of Short Horns, and the most superb lot that we ever saw together, or shall expect soon to witness again, and in many cases the judges were almost at fault in deciding between the respective aspirants to their favor. Among the horses we saw hunters, roadsters, hacknies and cart-horses, all excellent animals, but we thought no way superior for our purposes to the splendid breeds that we already possess at home. The sheep generally presented an unnatural fatness that we do not admire; so also with some two or three Short Horns exhibited as fat animals; there is a bound to this sort of thing that we cannot think it profitable to pass. The swine were of two classes, one of medium size, very fine, the other large and somewhat coarse.

Many agricultural implements and seeds were at the exhibition, and some sheep netting that we afterwards saw considerably in use for folding instead of hurdles, and of which we think very highly. It is as durable as hurdles, and perhaps not one twentieth part as heavy; it makes with a few stakes an equally secure fence, is handled with more ease, and of course much quicker. The cost for the best quality of tarred twine is very reasonable, cheaper than hurdles, and in case it should be wanted, we would recommend its introduction into America, though we think for our purposes it should be four instead of three feet high.

Rather over £800 (about $4,000) were distributed in prizes on this occasion, which is liberal for a single county, although that of York is perhaps twice as extensive as any other Shire in England, and improved stock is its peculiar feature of agriculture. We don't know that our readers would feel particularly interested in having a report of all the names of the successful competitors at this exhibition, and were we to name but a few it might seem invidious; we therefore pass them over in silence.

These matters all settled we come to the dinner, and as a celebrated reader of Homer's Iliad, considered that the feasting of the heroes were the most interesting passages of this immortal epic, why should not that of the farmers of Yorkshire be the same to those of our own country, particularly as we have no new arrangement of cattle sheds, and other mighty matters to present them, other than we described in our first No. at Liverpool.

The tables being lettered, and every plate numbered, with their tickets in hand, each guest found his place without confusion, but if perchance he happened to forget himself and make a mistake, he never took the trouble of going round, but very unceremoniously leaped on to the table with one foot, and down on the opposite side with the other, to get across. As we we are not *particularly* ambitious of becoming the Trollope or Hamilton of English "Manners," we forbear comments that will suggest themselves to our readers.

Lord Wharncliff, the president of the Society, presided, and had to his right and left a respectable sprinkling of noblemen, knights, M. P.'s, and Esquires, among whom we noticed that steadfast and unwavering friend to agriculture, the celebrated Earl Spencer. There were 1,200 seats provided, and the tables nearly full.

We had plenty to eat of the different kinds of cold meats boiled and roasted, ham mutton, beef, fowls, and fish, garnished with the vegetables of the season, and each guest, if we recollect right, his bottle of wine, which by the way we did not taste, but from the particular rubicund hue of some of our neighbors' faces at table, after emptying a few glasses, we had a suspicion that it was pretty tolerably seasoned with brandy. Perhaps the caterer for the feast, thought with Dandie Dinmont, that it might otherwise prove "o'er *cauld* for the stomach." When the toasts and speeches had got well under way they became somewhat long in the wind, and growing impatient we absconded the dinner table, and joined what proved more agreeable to us, a private party at tea. This over and an hour of sunlight still left, we sought the zoological gardens in the suburbs of the town. Here by the side of winding walks, and amid flowers and shrubbery, were huts for elephants, rhinoceros, camels, and alpacas: caves for bears, and dens for lions, tigers, and as the bills have it, other "*amphibious* beasts" with water pools, jets d'eau, and mounds with summer houses on top, bands of music, mountebanks, and tents, where men arranged all sorts of eatables and drinkables,* and at nightfall a grand display of fireworks. Ladies, lords, and gentlemen were there, sailors, farmers, mechanics, and the peasantry of the country, with their wives and children; all ages in crowds enjoying themselves with great glee. It was the same at the show at Liverpool, only as the town was larger a greater variety of entertainments was got up for the occasion, and this is the way that agricultural fairs and shows should be conducted; then every one looks forward to them not only as meetings of instruction, but of high zest and entertainment, where all ages, sexes, and conditions, can enjoy themselves in an agreeable way. How different this we thought from those where a few men and cattle, with a half-dozen curious idle urchins get together; each staring at the other with "lack lustre eyes" a cold hour or two, and then all betake themselves off, till another year brings round the same dull unvaried show. There may be some profit in such a meeting, yet we could never think there was much zest or pleasure to it, and if the friends of agriculture ever expect to interest the great mass of the people in their improvements, they must serve up a few adjuncts with the stock, and make their meetings rather more of a gala day to the public at large.

Hull is an ancient town of some 20 or 30,000 inhabitants, the principal part of whom are enclosed by the river and a wide canal for the shipping, crossed by drawbridges. It has an extensive commerce, the most interesting item of which, to the agriculturist, is the importation of bones for manure. In the year 1839, the quantity imported into this port from foreign countries, was supposed to be 33,000 tons, and the value of bones imported into all England during the year 1837 was declared to be full $1,200,000. Hull is famous for the birthplace and port of departure of that veracious sailor, Robinson Crusoe, the history of whose voyages, we will venture to say, has set more heads wandering than all the other story books that were ever written. We rambled up and down the streets of the old part of the town, so narrow that a corporal's guard could hardly walk abreast in them, and quite shut out the light of day by the jutting stories of the queer old houses, in search of the veritable mansion where this redoubtable hero formerly dwelt, but did not *succeed in finding it.* It is quite certain, if reports be credited, that many of the relics of the heroes of Waterloo have been transported here from the Netherlands to fertilize their fields. We thought it a burning shame that the poor fellows, who in that terrible struggle had offered up their life's blood on the altar of their country, should be put to such base use, but we had forgotten Hamlet's utilitarian soliloquy of,

> "Imperious Cesar, dead and turned to clay,
> Might stop a hole to keep the wind away."

But all flesh is grass; and all grass again, with equal truth it may be said is flesh, and had Shakspeare written in these *chemical* days, he would, most undoubtedly, have finished the stanza thus:—

> Oh that the *bones* which kept the world in awe,
> Should grow green turnips and bright wheaten straw;
> By decomposing gelatine and oil,
> Phosphates and lime, upon th' impoverished soil.

We are great friends to bone dust as a manure, and are well aware of its fertilizing qualities, and while we would enjoin upon all, to save with industrious care, the bones of the whole brute creation, we must strongly object to the graves of even a slave or beggar being disturbed, much more those of the gallant soldier; and we are surprised that the government of the Netherlands should permit such a desecration; it is on that, and not the English importer, that the blame rests, admitting that the paragraphs we have often seen in the newspapers of this despoiling of Europe's great battle-field be true.

---

* We are not sure, but think we might except ardent spirits from all the drinkables here at the gardens. At any rate, we saw no intoxication there, but every thing was orderly and well conducted; and the looks alone, of the joyful rosy faces of the laughing, healthful children present, well repaid the expense of the entertainment; and in fact, of the two, this was rather the *finest show of stock* exhibited that day to our eyes.

KENTUCKY FARMING.

Concluded.

Sheep.—We should be glad to see the size of the Merino a little increased by crosses with the Rambouillet; we think they would also improve the quality, as we know they would add largely to the quantity of their wool; and to make mutton, we should desire greatly the introduction of a few South-Downs. We are satisfied that it would conduce to the health of the population, if in their food they would use *more mutton*, and consume *less pork*. The former is lean, tender, and always palatable, while the latter is gross, and during hot weather, scarcely endurable to many palates. The wool of the South-Down is also as well adapted to make common clothing as the Merino, and is more easily manufactured in a domestic way. We heard it intimated while in Kentucky, that the South-Downs were not a hardy sheep; the reverse is the fact, for on the high hills of the western counties of New York, where the thermometer frequently sinks to 20°, and even 30° degrees below Zero, and six months foddering out of the year is required, they stand the climate as well as any other breed existing. Their size and forms in England have been latterly greatly increased and improved, and it is quite common now to see them weigh from 16 to 24 lbs. per quarter dressed at one year old. For wool destined to be sold at the East, we would recommend the cultivation of none but the finer breeds, producing the best quality, and this should always be clean washed, and put up in the neatest and most compact manner, pressed, if possible, in bags as close as cotton bales. It costs no more to transport the highest priced grades of wool to market, than those of coarser qualities.

Swine.—In these the Chinese and Berkshire have made greater and more desirable improvements than any other breeds. There are thousands still left however, of Landpikes and Alligators, and on our journey from Louisville to Frankfort, we noted among other discoveries, a touch of the *Wolf*-breed. These animals, we should judge, were cultivated like those of Okatka in Russia, for their *bristles alone*, for they stood staring out every way from their gaunt carcases, full 6 inches long. We also saw a few long-legged coarse woolled sheep, that could never pay for their keep at a six months' grass pasture; scrub cattle also a few, and many of the horses with crane legs and slab sides, and seemingly totally unfit for either saddle or harness. In good roadsters, and a hardy stout active race of farm horses, we think the whole South-west greatly deficient. For these purposes they employ too many of a sort of nondescript, bred, we should judge, between a tall Dutch cart horse and light leggy racer. But these, together with some slovenly crops, outbuildings, fences, and farming, are rather ungracious matters to dwell upon, we therefore forbear.

We could not learn that any systematic course of cropping has yet been adopted in Kentucky, except by an enlightened few; too many, as in New York and elsewhere, having followed up the *skinning* and exhausting system, and then sold out and sought new regions and a virgin soil further west. This is the bane of American husbandry, and with a view of counteracting it, and putting a stop in a measure to the depleting emigration, with becoming liberality, the State Agricultural Society offered prizes for a series of papers on the best rotation of crops for Kentucky, that should embrace, at the same time, an improvement of the soil. These were won by her eminent agriculturist, the Hon. Adam Beatty, and published in the fourth and fifth vols. of the Kentucky Farmer; and we would recommend a close and careful perusal of them to all who wish to benefit and improve themselves in the science of agriculture.

On a farm of 300 acres, 75 of which are reserved for woodland, 25 for meadow, garden, orchard, and raising hempseed, and 200 in cultivation, where *hemp is the main crop*, Mr. Beatty recommends the following division and rotation of twelve years, in four fields of 50 acres each.

	No. 1.	No. 2.	No. 3.	No. 4.
1841	Corn	Clover	Rye	Hemp
1842	Rye	Corn	Clover	Hemp
1843	Clover	Rye	Corn	Hemp
1844	Corn	Clover	Rye	Hemp
1845	Rye	Corn	Clover	Hemp
1846	Clover	Rye	Corn	Hemp
1847	Hemp	Clover	Rye	Corn
1848	Hemp	Corn	Clover	Rye
1849	Hemp	Rye	Corn	Clover
1850	Hemp	Clover	Rye	Corn
1851	Hemp	Corn	Clover	Rye
1852	Hemp	Rye	Corn	Clover

In this rotation it is contemplated that the clover shall be pastured till the rye is ripe, the stock then be removed to this, and the second crop of clover be allowed to grow up and ripen, to be ploughed under late the same fall, or early in the winter for the succeeding crop of hemp.

In a rotation of a tobacco crop, the same writer suggests, that 30 acres be set apart for this purpose, in three fields of 10 acres each, with the following eight years rotation.

	No. 1.	No. 2.	No. 3.
1841	Tobacco	Clover	Clover
1842	Tobacco	Clover plowed up in fall.	Clover
1843	Oats & Clover	Tobacco	Clover
1844	Clover	Tobacco	Clover plowed up in fall.
1845	Clover	Oats & Clover	Tobacco
1846	Clover plowed up in fall.	Clover	Tobacco
1847	Tobacco	Clover	Oats & Clover
1848	Tobacco	Clover plowed up in fall.	Clover

The oats, he remarks, are sowed the first year, to prevent the growth of weeds. They should not be allowed to ripen their seeds, as this would exhaust the ground, but as soon as in flower, a heavy bush or roller must be dragged over them, thus prostrating the straw upon the field to decay and enrich it.

When wheat is intended as the main crop, a writer in the Kentucky Farmer, vol. 4, recommends dividing a farm of 200 acres into eight fields, and the rotation thus—

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.
1841	Fallow	Corn	Rye	Wheat	Clover	Wheat	Clover	Wheat
1842	Wheat	Fallow	Corn	Rye	Wheat	Clover	Wheat	Clover
1843	Clover	Wheat	Fallow	Corn	Rye	Wheat	Clover	Wheat
1844	Wheat	Clover	Wheat	Fallow	Corn	Rye	Wheat	Clover
1845	Clover	Wheat	Clover	Wheat	Fallow	Corn	Rye	Wheat
1846	Wheat	Clover	Wheat	Clover	Wheat	Fallow	Corn	Rye
1847	Rye	Wheat	Clover	Wheat	Clover	Wheat	Fallow	Corn
1848	Corn	Rye	Wheat	Clover	Wheat	Clover	Wheat	Fallow

To the above, many would add woodland pastures for their stock, and the cultivation of other grains, and more roots than are here set down in division for rotations. We add no suggestions of our own, as we are promised them by those better qualified than we are to give them, viz. the able writers of Kentucky themselves. We were there as a scholar, not as a teacher, and we will frankly say, from what we saw during our limited stay there, that we do not see how the system of cropping and stock raising can be much improved, as practised by her most enlightened planters. The only suggestions that occur to us just now are, that we think it would be beneficial to introduce a system of draining, where the lands are too level, heavy, and wet; and again that of irrigation where springs and streams can be found of sufficient elevation to lead them along over the land. In so dry a climate, by proper irrigation, the products, especially in grass, may be easily doubled.

The great thoroughfares of the State are well McAdamized, making it a pleasure to travel over them at all seasons of the year. Some railroads have been attempted, but we believe all, except the one leading from Frankfort to Lexington, are now abandoned. We rejoice at this, for they are totally unsuited to any country, except to link large populous places, between which there is an immense travel. A railroad only accommodates a particular set, while a McAdam benefits all within its reach, and is especially to be preferred in an agricultural district. Nor need the travel on it be so much slower as is generally believed. We talk about railroads of the United States averaging 25 miles an hour, whereas they hardly come up to 15 miles the hour, and with well selected horses, and adopting lighter vehicles, and limiting the passengers to six inside, with three out, 8 or 9 miles an hour, except in the hottest weather, may be comfortably averaged by the stage coaches. Then there is the advantage of having a good road open to the private carriage, the horseman, pedestrian, farm wagon, and droves of stock bound for distant markets.

In addition to the wild mountain scenery of Kentucky, all have heard of its mammoth cave. Innumerable smaller ones also exist, bold precipices are scattered here and there, while many of its streams flow off through deep gorges, surmounted by high bluff banks Ranges of sharp conical hills, interspersed with those of a more gentle and rounded form rise around, and give variety to the landscape, and even the most level plains are generally sufficiently rolling to carry off all surplus waters. Springs occasionally ooze out of the beds of limestone along this rolling country, but upon the whole there is rather a scarcity of water on their richest and most level lands. This is obviated in a measure by damming up the rivulets, and excavating ponds, but during very dry seasons they suffer for want of water and some are even obliged to drive their stock short distances to be kept by the side of larger streams, till a further supply of rain.

Many of the plantations are beautiful, and strongly fenced in with high stone walls, where the material exists for forming them, or in their absence, neat posts and rails, or the Virginia fence is substituted. The family mansion is usually of brick or stone, and placed on rising ground, as near the centre of the plantation as possible. They are generally of fine architecture, with porticos and pillars, or piazzas in front. But those we most admired are of the cottage form, flanked with buttress-like chimnies, built up outside, that detract nothing from their neatness of appearance, but add greatly to their strength and massiveness. Hard by, and frequently surrounding it, is a noble park of forest trees, while evergreens are grouped here and there, together with tasteful shrubs, enclosed by neat palings, large grass plots spread out in front, chequered by gravelled walks, adorned with flowers, while in the rear is seen the well-stocked garden. From thence the private road leads to the main public one, and spring gates open from field to field, over which, on a high spirited horse, it is an exciting luxury to take a hand gallop.

The people of Kentucky are warm-hearted, and very hospitable ; with a frank, open, liberal manner about them, that puts the stranger immediately at his ease, and makes his stay among them pleasant and agreeable. We hope to renew our visit during the period of shows and fairs during some autumn, when we can see its superb stock to proper advantage. We intend to give more particular notices when we visit it hereafter, and now close these general remarks, by expressing our obligations for the hospitality and attentions that were so liberally extended us, during our visit to this noble state.

SUGGESTIONS *for the Regulation of Premiums given by Agricultural Societies, and manner of judging by the Committees of Awards.*—As there are great varieties of soil and climate, and as animals, seeds, roots and manufactures are wanted for different purposes, and though quite unlike, each one may be the best adapted for the particular purpose for which it was formed, they ought to be arranged in different classes, and judged, not against each other, but by themselves independently, according to those different qualifications. In exhibitions, therefore, of agricultural societies hereafter, we beg leave respectfully to suggest the following divisions and classifications: —

HORSES we would divide into three classes.

Class 1st. The horse best fitted for the saddle and cavalry purposes, that should show a pedigree without stain from the stud book.

Class 2d. Roadsters, uniting in them the best carriage, and as good saddle qualities in addition, as could be found.

Class 3d. The best farm and draught horse, taking into consideration his adaptation to the business of cartmen in our cities. To match or single geldings we would simply award diplomas of three different degrees, according as they stood in rank, for these would stamp the animals with an extra value, which would be sufficient to pay for the trouble and expense of exhibition, aside from the probable opportunity of making a sale, when this was desirable, by the exhibitor.

ASSES, one class only, as their merits in this country depend entirely on producing the largest and finest stock for the draught.

MULES also, one class, as they are rarely used among us, except for the draught, and as beasts of burthen.

CATTLE should be divided into six classes.

Class 1st. SHORT HORNS, as they are supposed to possess, in a more eminent degree than any other breed, a combination of those qualities that will produce the most beef and milk for the food consumed. A herd book pedigree in these ought to be required to entitle them to an exhibition.

Class 2d. HEREFORDS, as they are considered the most powerful breed in the yoke, are excellent beef, and occasionally good milkers.

Class 3d. AYRSHIRES, as on lighter soil and thinner pasture, they stand in the same relation to other breeds that the Short Horns do to Herefords.

Class 4th. DEVONS and SUSSEX, being admirable also for light soils, as the Herefords are for heavy ones; and some families, especially among the South Devons, are known to be first-rate milkers.

Class 5th. Any *native* bred animal, no matter what the cross might be, provided it was but one of the pure bred animals as above, the best adapted for beef, milk, and the yoke on rich soils.

Class 6th. Any *native* bred animal with the same qualifications as the last mentioned, the only difference being the best fitted for a more sterile country.

SHEEP should be divided into four classes.

Class 1st. Those raised for fine wool, and in judging of this, quantity produced, form, constitution, size, and mutton qualities of the animal should be taken into consideration.

Class 2d. The South Devon, as their mutton is superior for the table, their wool easily manufactured in a domestic way, and sufficiently fine for all family purposes, besides being an active hardy sheep.

Class 3d. Should embrace all the long-woolled varieties, such as the Bakewell or Leicester, Lincoln, Cotswold, and New Oxford.

Class 4th. Any native bred sheep that shall possess the best combinations of wool and mutton, size, thrift and constitution for the particular locality where bred.

Swine, we think, ought to be divided into two classes.

Class 1st. Any breed that it could be shown would fat 250 to 300 lbs. or more at the age of 9 or 10 months; or 600 to 700 lbs. at 18 or 20 months age.

Class 2d. Any breed that would attain half the weights of the above or more, at the same ages; of course, quality of meat, fineness of point, and easiness of keep in the animal exhibited would rule the judgments given, after the ages and weights were ascertained. The reasons for dividing these animals are, that larger and smaller are wanted for different purposes, and the smaller class can be grown up mostly on the grasses and coarse herbage, while the larger ones would require heavier food, such as grain mixed with vegetables.

In Dairy products there should be only one class for butter, but cheese may with propriety be divided into two or three, such as cream cheese for the first, new milk for the second, and perhaps we may suggest, skim-milk for the third, as it is a kind that may be produced in certain localities, where the milk could not be applied to any other purpose so profitably.

The domestic Fowls have always been entirely overlooked, but how largely do they contribute to the food of our tables; we would therefore suggest, that premiums be awarded to them, for they are by no means a small matter in agricultural products. In these we would recommend three classes at least.

Class 1st. The Bucks County fowl of Pennsylvania, the Malay, the Spanish, the Dorking, the Java, and any other large sizes.

Class 2d. The Poland and other medium sizes.

Class 3d. Bantams, &c. Fertility in producing eggs, delicacy of meat, hardiness of the bird, easiness of keep, and good shape, should be the rules of preference.

Fat animals of any kind, such as cattle, sheep and swine, might perhaps with propriety, be limited only to diplomas; for their meat, in consequence of their being prize animals, would generally bring enough extra to pay for the trouble and expense of exhibition.

All grains, grasses, and roots, ought to be classified by themselves, for every one knows, that certain kinds of wheat, corn, barley, peas, beans, roots and grasses, suit different soils and climates; it would be a great error, therefore, to judge one against the other. For instance, we will suppose that the state societies of Virginia and Ohio, offer but one premium on corn. Now the mountainous and lake regions of these states require an entirely different grain for their respective soils and climates, than suits the rich alluvions of the lower Potomac and James rivers, and the wide bottoms of the Sciota and Miami.

We make no suggestions about articles of domestic manufacture, as they will come in as a matter of course, and to these we would add sweetmeats, jellies, and other knick-knacks, for the purpose of more particularly interesting the ladies. These things have a due share of attention with the societies at the south, and certainly it would be a great privilege to be placed on such a committee. Where ladies would be the best judges, they ought to form the committees exclusively.

Every thing shown for premiums ought to be on the ground a sufficient time previous to the day of exhibition, to give the different committees an opportunity of carefully arranging, examining, and making their awards. After which, large cards should be hung up over them, proclaiming their awards, so that all could look at them, and at once know for themselves, without further questioning, which they were.

We now come to a very important suggestion—it has been asserted that committees as heretofore formed, were little better than secret conclaves, whose reasons for their decisions were just as impenetrable as those of the Venetian Senate or Spanish Inquisition; and very many have consequently declined exhibiting, till they can publicly know by what principles their animals or manufactures are judged. For these reasons we would respectfully suggest, that on the second day of the exhibition, the chairman of each committee mount the rostrum, the animal or manufactured article be brought out before the public, and then the explanations for their decisions be set forth at large.

We are free to assert, that there can never be any general fixed scientific improvements made till such a course is adopted; and if a member of any committee has not sufficient confidence in his knowledge and judgment, and the moral courage to proclaim the same publicly and his reasons therefor, he is undeserving a place on that committee. What a school would this be to the rising, and aye to much of the risen generation. A person might learn more by attending one such day's exhibition and explanation, than from studying books, and plates, and animals, unaided by the opinions of others, for a month.

As awards are now managed, they become as variable as the wind. What was declared to be best yesterday, is denied to-day, and both subverted to-morrow; while, perhaps, on a fourth exhibition, the first may again come uppermost; and all this without the slightest enlightenment and explanation to the public. All, therefore, but the few who stand aloof with superior knowledge are at a loss, and left to grope in the dark, without chart or compass to steer by.

Summer Drinks.—*A short chapter on Eating and Drinking in hot weather.*—We can well recollect the time, as the haying and harvesting season approached, it was deemed necessary, in every well-supplied farmhouse, to send "to town," or the village store, and lay in a demijohn or keg of old Jamaica, Santa Cruz, New England, cider brandy, or rye whisky, to help through these severer labours of the farm. Alcohol, in some shape, was deemed indispensable by the greater part of the farmers. Occasionally a man was found far in advance of the age, who avoided it altogether, regarding it with no more favor than the most inveterate reformer of the present day. One of these we well remember, whose ready wit, and fund of anecdote, and always social and humorous spirit, afforded amusement and instruction to many a childhood hour, who lived till he was 96; and another, our always active and indefatigable parson, still in vigorous health and the performance of his clerical duties, is close verging upon 90. These were strictly temperance men, never touching ardent spirits on any pretence. But there is no necessity for us to urge the injurious effects of resorting to alcohol. The spirit of reform has preceded us, and every intelligent man would as soon think of supplying himself or workmen with foot stoves or pea-jackets for haying, as any liquid of which alcohol formed a part; yet a suitable provision must be made for the excessive labors that are required during the hottest portion of the year.

As a preliminary to what is required for drinks, we would suggest some remarks as to what is required for food; as by properly adapting this to the season, we may very much lessen the quantity of drink required, even during the greatest exposure to heat and labor. And the first thing we would suggest, is to lessen the quantity of meat generally used during hot weather. The appetite does not crave or relish much meat in summer, and it is a great provocative of thirst; and whatever is used should be plainly cooked, not too highly salted or spiced. A larger share of light food should be substituted for meat, than is generally used in summer; and, for this purpose, a well-stocked vegetable garden will afford a great variety of wholesome, palatable, and nutritious dishes, when skilfully prepared. There are numberless forms, also, in which milk, and fruit, and berries may be used, in the various combinations a skilful housewife so well knows how to prepare, which are far more tempting to the weary man than the solid and constantly repeated dishes of meat, meat, meat. The excessive use of hearty and solid food was not common among many of the hardiest nations of antiquity—as the Greek and Roman; nor even among our English ancestors of the middle and later centuries. Tusser, who wrote nearly 300 years ago, in alluding to the ordinary food of farmers, says, "No *spoon* meat, no bellyful laborers think;" and it was not till the cold weather of the approaching Christmas they could indulge with impunity in the medley of the *gourmand.*

> Good bread and good drink, a good fire in the hall,
> Brown pudding and *souse*, and good mustard withal,
> *Beef, mutton,* and *pork, shred* pies of the best,
> *Pig, veal, goose,* and *capon,* and *turkey* well drest.

It is a mistaken notion that there is not *strength enough* in any other food *to work by.* We once knew a man win a wager in a three days' job at mowing, and his only food was Indian pudding and milk; though of this he had a full supply, and took it as often as he chose. The example of Franklin is familiar, who, living on his plain biscuit or bread and a handful of raisins, and drinking only water, could yet do more presswork than the strongest of his beef-eating, beer-drinking companions. An Indian will take his pouch of parched corn, and, with this and water only, he will perform a journey that would tire out successively any two or three of our hardiest laborers. The Arab, with his camel's milk, and the wild Cossack of the steppes of Central Asia, on mare's milk, will endure fatigue which would exhaust the most inveterate beef and pork eater. Notwithstanding these examples, we are decided advocates for the use of meat in moderate quantities, but are satisfied there is altogether too much of it used in this country, either for health, economy, or comfort. Though inflexible advocates for three regular meals a day, under ordinary circumstances, we are satisfied when the breakfast is taken early in the morning, and supper late in the evening, hard-working men require a lunch between meals. This should be light in quality; not meat, or hearty cake, or other rich food; but simple bread and butter, or something light and easy of digestion and moderate in quantity, and so timed that it shall leave a good appetite for the regular meals. With the lunch, a moderate quantity of drink should be taken, and hardly any will be required at any other time. It is much better when the stomach is empty and craves something, to take a cracker, or some bread and cheese, and a light draught of some liquid, than to attempt to satisfy the craving entirely with drink of any kind, unless it be milk, which is itself a food. Excessive drinking weakens and disorders the stomach, and should never be indulged in; and if the proper kinds of food be used, it will not be craved. A little self-denial or discipline will do much to lessen the desire for drink. Some never drink except with meals, and not being accustomed to this indulgence, find no inconvenience in doing without; but we deem such a habit hardly possible with the excessive perspiration to which laboring men are frequently subject.

But to the kinds of drink. After excluding alcohol in all its various shapes and disguises, whether ardent spirits, wine, strong beer, or cider, and we would add, strong tea and coffee, the last of which we deprecate as especially injurious to the stomach and nervous system, we would allow the taste or convenience of each to select for himself. Of water, pure, unadulterated, unmixed water, might be said, as the primitive legislators of Connecticut said of the Bible,—they would use the laws of God till they found time to make something better. Like air and light, it is of universal prevalence, and with these and all other works of their great Author, it is best suited to answer the general purposes of its creation. An addition to it, however, may be made, and perhaps with advantage, of ground ginger, vinegar, and molasses. We have used this beverage during summer for the last few years, with a large number of hands, and never found any inconvenience from it. It is better to stand two or three hours, or longer, after mixing; and water should in no instance be drunk immediately after being taken from the spring or well, especially if the person be warm. When heated, and it is desirable to drink immediately, a stream of water poured on the wrists or palms of the hands, will soon reduce the temperature so that one can drink with impunity. Successive mouthfuls of cold water, held in the mouth till it becomes warm and thrown out again, will mitigate thirst, reduce the heat of the body, and can never do injury to the stomach. When water is impure, such as is taken from stagnant ponds or filthy streams, or charged with mineral substances, as is much of it which the occupants of new lands are obliged to use, it *should invariably be boiled;* and if then insipid, may be mixed with milk, sugar, vinegar, or jellies from some of the fruits and berries which the careful housewife may supply for this purpose, with little trouble to herself, and great comfort to her household. Light beers, as ginger beer, mild hop and root beer, are economically made, palatable, not injurious, and within every one's reach. We give some original receipts in this present number, of such as are without objection. But of all the forms of drink, we consider milk, with which every farmhouse is or ought to be abundantly supplied, mixed with water, one of the most wholesome. When it does not agree with the stomach, boiling will usually render it acceptable. Oatmeal mixed with water, and allowed to remain a few hours, is a long-practised and favorite Scotch beverage, grateful to the palate, and invigorating and bracing to the stomach.

The above are brief hints, hurriedly thrown together, and may be enlarged upon by each person for himself; but if strictly followed out, we will agree to pay for every lost day, and doctor's bill, incurred in consequence of practising them.

FARMING TOOLS.—There seems to be a *fashion* among the manufacturers of farmers' implements, that varies from time to time, not simply in the form and style of the article, but in the quality and durability also. These changes occur to such an extent, as sometimes seriously to incommode the farmer.

And it is observable not only in the more complicated instruments whose character for utility is not fully established or generally acknowledged, as in some of the mowing and thrashing machines, but with those of the simplest construction and of universal use. We have, for instance, found it for two seasons past almost impossible to procure at the western extremity of this state, a well-constructed durable hoe, rake, pitchfork, or basket. Here are utensils that almost any mechanic can make, in use for thousands of years, and of absolute necessity, and yet not to be found of a proper kind in an extensive market. There are an abundance of the articles, to be sure, such as they are, and cheap enough,—for no one could object to the price; but being, like Pindar's razors, made only to sell, are so utterly useless to any but the manufacturer and merchant, as to leave it very questionable whether a person could not do almost as well without as with them.

This vexatious condition of the tool market is, to a great extent, owing to the farmers themselves, who, in their eagerness to get things cheap, carry the principle so far, at last, as to get such as are utterly valueless. Axes, shovels, and spades, cradling and other scythes, are articles that subject the workman to so much less labor when good ones are used, that, for many years, by universal consent, only the best, *the very best*, would be tolerated; and it is no difficult matter to find, in every market, such as are made on the best principles, and of the best and most durable materials. The others, by almost as universal consent, have been allowed to deteriorate to a point beyond endurance. The only remedy we suggest, and it is a sufficient one, is for farmers to buy only the best, and give such prices as will enable the manufacturer to make a fair profit from them: the inferior he ought never to buy, if furnished at one-fourth the price of good ones. In this way he will always secure a supply of such as may be depended on. We need not add, that every farmer should always see that he has tools enough, and always in order, and always at hand, that time should not be lost in finding or putting them in order, when he ought to be at work with them. More time frequently is lost by borrowing twice of a neighbor, than would suffice to purchase the article, to say nothing of the loss and inconvenience to them, which is an item not to be overlooked by men of even moderate honor and integrity. Money cannot be put to better interest than in a surplus stock of good tools, if kept properly housed

ACKNOWLEDGEMENTS.

To T. B. Stevenson, Esq., of Frankfort, for bound vols. 1st and 2d, of the Kentucky Farmer. This has always been a favorite work with us, and the two first vols. being out of print, we esteem the present of them on the part of the editor, very highly. We regret exceedingly to learn that it is now discontinued for want of patronage sufficient to pay the printer. Mr. Stevenson would never receive any remuneration whatever, as editor, and notwithstanding other onerous duties demanding his time and attention, with a high-souled love of the cause, and the hope of his doing his country some good, he volunteered to conduct this work gratis, and 5 vols., through as many years of labor, attest the value of his services.

To Charles Foster, Esq., publisher of the Western Farmer and Gardener, at Cincinnati, the two first bound volumes. This work is better illustrated with engravings from Mr. Foster's own pencil, than any other agricultural publication that we know of in the United States, and having turned its attention to southern as well as western products, its correspondence is greatly enlarged, its patronage increased, and we are glad to notice the 3d vol. going on with renewed spirit and success. We will gladly accept the agency of it, and take pleasure in offering it to our friends.

To Mr. Beltshover, near Pittsburgh, of some of the tallest rye we have ever seen. It measured over 9 ft. high, and the heads are large and well-filled, and we are informed it was a fair specimen of the crop of the entire field. Such a crop would gratify a Mississippian fresh from a bear hunt in a cane brake.

From several friends we have specimens of rice, sugar cane, and a variety of Southern products. We hope, with the assistance of the able correspondence promised at the South and West, to give the cultivation of these articles a due interest in this paper hereafter.

Dr. Tegarden has engaged to forward us, next winter, a box of roots of the grass Herba Hispania, with some other Southern products, which we shall distribute among our Long Island and New Jersey friends, with a view to their cultivation in this latitude; and, in the mean time, if any of our correspondents at the north have already experimented on this or similar products, we shall be glad to hear from them.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

Southern Agriculture.

Mississippi City, May 16th, 1842.

GENT:—Having been favored with the perusal of the first number of your useful work, which invites any correspondence that may prove valuable to agriculture, and in developing the resources of our extensive Union, I take the liberty of giving you a partial account of this section of country and its products. The whole extent of the Mexican Gulf Coast, from Pearl River to Mobile, is a sandy pine woods country, and generally for one to two miles from the sea, the land is entirely sand for the first or upper strata which is from four to six feet deep. The sand is yellow, with a great many small particles of iron ore, with very little clay or earth of any kind below this for several feet. Indeed, so far as it has been penetrated, it is a white sand, full at all times of the purest water. This place is about equi-distant between New-Orleans and Mobile, by which, steamboats pass every day each way between those great and growing cities. In point of health no country in any clime can excel this.

This country was settled originally by the French, early in the eighteenth century, whose descendants have pretty much occupied it ever since, but seem never to have attached any importance to it in an agricultural point of view, except to raise a few fruits, which grow as if they were indigenous to the soil and climate, such as the Fig, Peach, Grape, Plum and Mulberry. In the last year or two, however, there seems to be more anxiety on the subject of agricultural improvement, and I anxiously hope the day is not far distant when this will be regarded as the most delightful and profitable agricultural region in the Union; as I am well persuaded it is the healthiest, and will yield as much for the same quantity of labor as any part of the United States, notwithstanding its great apparent poverty of soil.

My own experience is very limited, although I have been in the country four years. In the month of January, 1839, I planted 25 cuttings of a Grape, supposed to be the Burgundy, and to have originally been brought to this country more than one hundred years ago by the French. I obtained the cuttings from a vine near the old French Fort on the bay of Biloxi, 12 miles from this place. Last year those vines bore about two bushels of grapes to the vine, the bunches very large and full, color blue, and about the size of a half ounce ball, not one faulty or bad grape to the bunch on an average. I trained the vines on a framed arbor about 8 feet high. This year the same vines are all very full, and the grapes now about half grown, and I think will yield from 3 to 10 bushels of grapes to the vine. There were many persons last year here who ate of those grapes, and universally pronounced them equal, or superior in point of flavor to any they had ever tasted. They ripen in July. My vines are now not quite three and a half years old.

I planted here at the same time, about 25 cuttings of the large Blue and small Yellow Figs, all of which bore a good crop last year, and are now full of fruit. The first crop is now ripe, and they will continue now to yield fruit in abundance until frost, about the 10th to 25th of November. Each tree will yield this year from 3 to 6 bushels of Figs, the fruit very delicious and nutritious, and last over six months fresh off the trees. A neighbor here sold, at 6 1-4 cents per doz., sufficient figs off one tree of the large blue kind, in the year 1838, to yield him $37.

The cherry, pear, and apple do tolerably well here. The dewberry ripens here the 10th of April, and is now nearly gone. They grow in great abundance on the sand beach and about all old fields, and are a delicious fruit; either to eat as gathered, or with sugar and sweet milk, or for pies, or to make cordial. The strawberry does well here, and yields two crops; one the last of March and first of April, and the other in July. The huckleberry grows all over the woods in this country, and ripens in May and June. The blackberry grows well, and ripens here in June. The ju-jube fruit, of which the cough paste of that name is made, grows and bears well here, and is a fine fruit. The quince and plum does well here as perhaps in any climate. The various kinds of mulberry grow very rapidly here, on the poorest spots, and yield an abundance of delicious fruit, and they are now ripe. There is no soil or climate that yields more or better water-melons, cucumbers, musk-melons, squash, or cymlins, okra, black-eyed peas, Lima or butter beans, bunch beans, egg plants, tomatoes. The sweet potatoe does well; also, the ground or gouber pea, rice, and the Irish potatoe, if planted in December and manured with lime.

The olive has been fairly tested by a very enterprising intelligent French gentleman, Mr. Debuys, at Biloxi, 10 miles from here, who says it grows faster and yields better than in France, and he believes it could be raised on this coast sufficient to produce all the olive oil consumed in the United States. I am indebted to Mr. Dupuys for my knowledge of the ju-jube also, who has several bearing, as well as many other choice fruits not mentioned. The pomegrante yields very abundantly here. The orange and lemon are bearing in many places along the coast, but not in large quantities, as they would require here some attention when our winters are very severe.

The great reason why this country has made but little progress in agriculture, is owing to the fact that the population has been very sparse, and the whole country covered with grass that supplied plenty of cattle and sheep, both winter and summer, sufficient for food, and a great many to sell in the New-Orleans and Mobile markets. The fish and oysters in great abundance on the sea shore, and about the bogs and tide water bayous where our people mostly reside, supply us with a great portion of our food; as also, much game—turkeys, deer and bear, in the woods, with wild geese, ducks, and a variety of sea fowl about our coasts. The articles of cord wood, charcoal, and tar, being easily obtained, are sent to the New-Orleans market, and bread stuffs and other articles of necessity obtained and brought back as return cargo. The climate being warm, but little clothing is absolutely necessary; hence our real wants being so easily supplied without exertion, I consider the great reason why it has never been made to develope heretofore, the agricultural resources of this country. There is an abundance of decomposed vegetable matter in and about the margins of creeks and low places, to manure the lands, and, from having tried it, I know it to be very fine. The Sea Island cotton grows finely in this country, and will yield about 160 to 200 lbs. net cotton per acre, which is very near as good a crop as the Mexican cotton on our best land in the interior of the state; and if health, comfort and cheapness of living were taken into account, is perhaps better. But the doctrine which has prevailed and made the world crazy for the last few years, of fortune making, instead of providing for a comfortable living, has been fatal to agricultural improvements to a great extent.

I have a grass here very much like the Bermuda grass, well known in Louisiana, which I brought from Guinea, on the south side of Cuba, in the year 1839, which I have tried here, and it has succeeded beyond my most sanguine expectation. I have planted it on the white sand beach, and it has grown and covered over where it appeared impossible it could have taken root at all. It is an excellent pasture grass, and, I think, will become profitable, particularly in raising sheep in this country, although at present and for years to come, almost any quantity of sheep can be raised in the woods, without any food winter or summer, but the natural grass. The turnip I have seen as fine here as I ever saw any where, on land where cows have been penned; also, good cabbage. I have sent for the herba spagna grass seed to Italy, which Dr. Cartwright, of Natchez, a very intelligent and scientific gentleman of much experience and great practical observation, assured me would do well in this country, and raised reveral crops in a year, and at each crop a ton of the finest hay per acre. If this grass succeeds half equal to Dr. C's. expectations, it will add more to the wealth, real prosperity, and happiness of the country, than the turning of half our sand into gold. Another great source of wealth yet to be developed in this country is the making of spirits of turpentine, which has never yet been attempted, except merely to tap a few trees to prove that they will run as well and abundantly as those in N. Carolina; but this I do not conceive of importance, if our people would give proper attention to the cultivation of the soil, the improvement of their stocks of hogs, cattle, sheep, horses, &c. These things properly attended to, would in a few years supply abundantly all our rational wants, and would greatly improve our mental and physical energies. As for health, we have that to our heart's content.

But our country wants an addition to its population of some of those economical, prudent, intelligent and industrious farmers from the northern and eastern sections of the Union, or from Europe, to set us some good examples, and who know how to live well and comfortable without making a large crop of Indian corn. It is a hard matter for a man raised in one of our western or southern states, to live in a country when he cannot make 50 bushels of corn per acre, and that his principal crop.

Whether my hopes will ever be half realized with regard to this country, I know not, but of one thing I am confident, that is it capable of all I have said or hinted: I have attempted no fancy sketch of its merits. Although the soil is poor and sandy, indeed all sand near the sea shore, yet its products are astonishing, and I have never seen any land so poorly cultivated any where. I have never seen land that would bear a drought so long and severe as this will, and keep vegetation in as good condition. Our land back from the sea shore is better, with a clay foundation, but it is also very poor; yet with proper cultivation and manuring will pay well. This section of country is the natural orchard and garden of New-Orleans and Mobile, and I do not despair of seeing the day it will become so in fact; and when that becomes the case, I fancy that this country will be filled with the most healthy, happy, intelligent, and really prosperous people in all that makes life delightful on the earth.

I have written you this lengthy and disconnected scrawl, not because I believed you could get any whole sentence or idea out of it worth a place in your paper, but as the editors of such a work as you are engaged in placing before the public, you may obtain some hints which may be of service to you hereafter, as I give you facts upon which to found opinions with regard to this part of our country.

Very respectfully, yours,
J. McCaughan.

Mr. McC. will please take back his criticism on this letter, and accept our sincere thanks for the glowing and we doubt not, *truthful* description he has given of the immense capabilities of the United States side of the Mexican Gulf Coast.

There seems to be a difference in the *orthography* of the grass mentioned above. We take it to be the same as *Hispania* in our last.

Perhaps Mr. Tegarden of New-Orleans, could furnish this seed. One of the great advantages of a general circulation of agricultural papers, is affording information to every section of the country in seeds and improvements which otherwise might remain unknown for years.

For the American Agriculturist.

Saxon Sheep.

Gent:—I was much gratified to peruse the first numbers of the Am. Agriculturist, and hail this accession to Am. Agricultural literature with great pleasure, from a conviction that its object is to improve the agriculture, and, consequently, the condition of the farmers. This, the most numerous and the most industrious class of inhabitants, had formerly but few periodicals devoted to the improvement of their profession; but it is most gratifying to perceive how rapidly they have increased in number, and improved in character and usefulness. When I look back, only fifteen years, to the period when I first settled in this country, there were then, if my memory serves me right, but two agricultural papers published in the U. S.,—the N. E. Farmer, and the Balt. Am. Farmer. But how many are there now? I have not been able to keep up with them, they are so numerous. To the question, whether they have improved the agriculture of the country, the answer is universally in the affirmative. Ought not, then, every farmer to take an agricultural paper? Undoubtedly. And if he reads, and reflects, and practices upon the many useful hints, my word for it, it will make him a better farmer. For myself, I can say that I have been much benefitted by them, and would not forego the pleasure of reading them for four times their annual subscription price.

I have, at different times and on different occasions, given my views and experience in sheephusbandry to the public, scattered through the columns of the Cultivator, Gen. Farmer, N. E. Farmer, Mr. Colman's fourth report of the agriculture of Mass., and in the Transactions of the New York State Ag. Soc., to which I beg leave to refer your readers. But, as the subject is a very extensive one, I was only able to touch upon the most important features, and left detail for some future time. I am, however, convinced that understanding and *practising* the detail makes in a great measure the successful shepherd,* and that the want of this understanding and practice, is one great reason why so many are unsuccessful. There are many small things to be attended to, which, separately, appear to the superficial observer trifling, but which, nevertheless, are very important. Take for instance a lot of young sheep, lambs or yearlings, and neglect them only a couple of weeks, late in the fall or beginning of winter, and it takes several months of extra care and extra feed to recover from the check; and if they do not receive this extra attention, three chances to one, many of them will die before spring, especially if it should happen to be a hard winter. I have adverted to this subject on a former occasion, but cannot omit pressing it again upon the minds of my brother farmers. I have seen many a flock that "look full and eat well", an expression which is often used, and the owners thought all was right, but, on examination, I discovered that all was not right, and that the sheep were running down, and if perchance the breath of life was kept in them, nearly a winter's growth was lost. Nor is this all. The quantity of wool is less, nor is the quality so good for manufacturing purposes; and though it may apparently possess a greater degree of fineness, the fact nevertheless is that it is deficient in *strength and elasticity*, consequently in the felting properties, and it does not make so du rable a fabric as healthy wool; and I have been assured that it does not take colors in such perfection. In Germany this subject seems to be well understood, and the growers' aim is to keep their sheep in thriving condition, produce healthy wool, and meet the views of the manufacturer. And to this, in connexion with the art of dying, (I ought to say science of dying, for in a German woollen factory a dyer has got to have a good chemical education, to understand the composition of colors,) it is probably owing that the German cloths excel in fastness of colors. Ought not, then, every farmer to keep his sheep, for his own benefit as well as that of others, always in thriving condition ?

---

* A most important suggestion, not only as to sheep, but all animals, crops, &c.—Eds.

With regard to the weight of my animals and fleeces, I would say, that I weighed my heaviest Saxon ram on the morning when he was shorn, with his fleece on, and his weight was 144lbs. He is in fine condition, and I think when he gets his full growth, with good keeping, he will weigh between 154 and 160lbs., and shear not less than 7 1-2lbs. wool. Three other rams, of which one is a two-year old, weigh from 110 to 128lbs.; they were well kept through the past winter, better than the rest of my flock. I have several yearling rams which can be made to weigh 160lbs.; and I have known, in Germany, pure Saxony Merino rams attain a weight of 180 to 190 and even 200lbs., and yield from 9 to 10lbs. of fine wool at a clip. The sheep, however, from which they were raised, were always in good condition, thus affording plenty of nourishment to the lambs from the beginning. I have known their fat wethers, four-years old, average between 20 and 25lbs. per quarter, and shear 4 to 5lbs. of fine wool per head. An uncle in Germany, who keeps a flock of between 3000 and 4000 sheep, some years since fatted 400 wethers which averaged 22lbs. per quarter, and sheared 4 1-4lbs. wool of eleven months' growth, which sold for one rix dollar per lb. Two high grade Saxony wethers, three-years old past, were killed in an adjoining town in September last; their live weight was 145 and 140lbs., and their carcases 95 and 92lbs., with no other feed but grass, but of this they had always an abundance.

You see, from this, that with good keeping the Saxony Merino may be brought to attain a good weight. They are a fine-boned animal, have an aptitude to fatten, and possess all the elements to make them as useful as can reasonably be desired, and there is no need of intermixing foreign blood. If they do not attain as large a weight of carcass as some other breeds of sheep, it must be borne in mind that they are smaller consumers, and yield a wool of far superior quality. I really believe there is a prejudice against them not well-founded in fact; and when they are rightly dealt by and justice done them, it will be found that they are the most desirable sheep for the American farmer, and will ultimately prove of greater benefit to the country than any other breed.

About a year ago I travelled through the state of Ohio, and was surprised at the small number of fine sheep that are kept there. That state has advantages for keeping sheep, especially in the southern parts, which New England and the state of New York have not. Mildness of winter, and abundance and cheapness of feed, enable the farmer there to keep at least two sheep where but one can be kept in this region. The difference is even greater than that. A friend of mine, who purchased a small flock of me and took them to the centre of that state in 1837, informed me that the expense of keeping them was about fifty cents per head a-year. This I should think a pretty correct estimate. Produce is low; corn from 14 to 18 cents per bushel. I do not know of any stock it could be fed to at so much profit. Many sheep farmers in this region buy corn at 50 to 60 cents per bushel, and have found their account in it. I saw the little flock in question in the month of May, and found they had improved in size, and quantity of wool, averaging over 3 1-2lbs. per head. I have no doubt that an average of 4lbs. of fine wool may be obtained from them in a few years more. I am, very respectfully, your obedient servant,

H. D. Grove

Buskirks Bridge, Renselaer Co., N.Y.,
July, 1842.

With the above letter Mr. Grove sent us 29 samples of Saxon wool, which we may safely pronounce *unsurpassed* by any in the world. A friend to whom we showed them exclaimed at once, they were *cocoons*; and we think the silk worms will have to take up another link in their spinning tubes to keep ahead of Mr. Groves' sheep. Mr. G. who is a native of Germany, and familiar with Saxon sheep from childhood, is generally known as having imported the best animals of this breed ever brought into this country, having through his friends access to the choicest Electoral flocks. *And they have not depreciated in his hands*, for he is unquestionably one of the most accurate and intelligent wool growers this country contains. We hope to see his flock before our next number goes to press, and speak personally of their merits, as well as some other choice flocks we have in our eye.

Mr. Grove has a few sheep for sale, which intelligent wool growers would do well to secure for the improvements of their own flocks, *for it is easier and cheaper to raise good wool than poor.*

Mr. G. will excuse us for adding some further information respecting his flock in a private note accompanying the above.

Inclosed I send you a few samples of Wool from some of my sheep;—they were taken promiscuously. I could have picked finer samples, but the inclosed are about a fair representation. The average weight of fleece this year is 2 lbs. 14 ounces of clean Wool per head—no grown wether, (only 10 yearlings,) 5 rams; the remainder were ewes and lambs. My sheep were kept very short last summer and winter also, on account of scarcity of food. I have not lost one per cent—indeed I lost but one sheep, a ewe, which got drowned with her young lamb this spring. I believe it would have surprised you to come into my stable last winter, and seen the small quantity of food they received—there was not a haulm of hay or straw to be found in it. All was eaten clean, and I was obliged to go into the woods and haul leaves for litter. I had a pair of steelyards on my hay mow all winter; weighed the hay often; fed potatoes and grain by weight, and not unfrequently weighed straw and corn fodder. Calculating the whole to hay and the average quantity per head, per day, did not exceed one and half pounds—excepting my breeding ewes, which I commenced feeding 4 bushels of potatoes per hundred, per day, and as much hay as they would eat besides, five weeks before lambing, and I raised from them at the rate of an hundred lambs from an hundred ewes.

For the American Agriculturist.

Bokhara and Sweet Clover identical.

Gent:—I observe by your July number, that you call attention to the "Bokhara Clover," so called, by the extract you have published from the London Farmer's Mag.

Last spring, a year ago, I observed a notice of this plant in the papers of Philadelphia, stating that the stalks had been exhibited in April, thirteen inches long, and informing the public, that it was grown by a seedsman in that city, who would be able to furnish a limited quantity of the seed, in the fall, to those who might desire to have it. The name of this seedsman I have now forgotten; however I immediately wrote to a friend in the city, and requested him, by all means, to procure me such quantity as he could, and without limit as to price.

Last fall he procured for me a small package containing about one hundred seeds, for which he paid to the grower of it one dollar. Highly pleased that I had procured it, I prepared a small patch in my garden this spring, and drilled the seed into it about the 1st of May. I had not long to wait for its appearance, for it soon sprouted. I was anxious to call attention to it as early as possible, and you may judge of my astonishment, when I tell you I was no little laughed at for the speculation I had made. I first pointed it to Mrs. H. She smiled and exclaimed, "That is the '*sweet clover!*' we had it in my father's garden ever since I can recollect, and it abounds through the gardens of this state as a flower plant, by the name of 'sweet clover.'" I requested her to examine it particularly, which she did, again affirming it to be the same plant, and offered to procure the seed for me at the rate of sixpence the hundred grains, instead of the dollar that I had paid. Her assertion with regard to it was afterwards confirmed by mnay others who recognised the old plant under its new name at once. Still I was not exactly satisfied. I was not willing to believe that I had been hoaxed. This morning I received your paper from the office, and at once observed the name of "Bokhara clover." I spoke it aloud, when Mrs. H. observed, that if I would walk to a garden a short distance, I could see it in full bloom. I immediately started, and asked permission of the lady in whose garden it was, to examine her "sweet clover" plants. I had not the opportunity of seeing it in bloom, as she had very recently broken the tops off to prevent their seeding, as it was becoming a nuisance in her garden. I however examined the plants below where it was broken off, and I now can add my testimony to that of others, that "Bokhara clover," so called, is identical with what has been known in Pennsylvania and grown here, "time beyond which the memory of man runneth not to the contrary," under the name of a "sweet clover."

I would not endeavor to lessen the value of the plant. I have no doubt but that it will form a valuable acquisition to the crops of field plants already in use; but I would wish to call the attention of those who can procure it easily and cheap, that the seeds may be taken care of, and instead of being permitted to go to waste, be furnished to those who wish to experiment with it in field culture.

Strip the thing of all mystery, and do not permit those who are really anxious to be in the front ranks of the "improvement army," to be imposed upon in the price of the article.

Let it be known, that the "Bokhara clover," so called, is the "sweet clover" of

Pennsylvania. The seed can be procured in small quantity, at a cheap rate, in almost every section of this country; and those who want it, need not pay, as I and several others have done, at the rate of several hundred dollars per bushel for it.

I would not wish to be understood by this communication, to be desirous to lessen the interest that has been taken in this plant. On the contrary, I would increase it. It abounds throughout our country, let all who have it within reach try it, and let the results of their labor be published, that those who have it not, may be able to see whether or not it is worth gathering.

Respectfully yours,
Jersey Shore, Pa. } J. H. Hepburn.
July 16th, 1842. }

We are obliged to Mr. H. for his prompt notice of the "Bokhara" or "Sweet Clover." Those who are desirous of experimenting in the article, may save their "*dollar for the* 100 *seeds*," from the information communicated above. This is a specimen of the *economy* of taking an agricultural paper. We believe it will prove a valuable acquisition to our hay crops for the purpose of mixing with coarse fodder, as directed in our last, independent of its intrinsic value alone.

The Weeds of Agriculturists.

July 16th, 1842.

Gent:—In looking over the last Cultivator, I perceive that one of their correspondents has commenced a series of communications which may prove very useful to our brethren everywhere. The design is to describe what he calls "*the weeds of agriculture*," and to suggest the means of extirpation.

This scheme has put a crotchet into my head, to try my hand at describing—not the weeds of *agriculture*, but those of *agriculturists;* for unless *they* can be first extirpated from our *minds*, it will be to little purpose for any one to tell us how we are to do with any of the kinds of weeds which infest our *lands:* the mental weeds will render all such information utterly useless.

In executing my project, I will endeavor to put on, at least, the appearance of some classical learning, since it is so much the fashion with writers of the present day, even when they address persons who have not a particle of it; and I shall, therefore, give your readers at least one foreign-lingo name for every mental weed I attempt to describe.

The first in my catalogue is *Inscientia*,—in plain English, ignorance, or want of knowledge. Whilst this preoccupies the field of the mind, no really useful mental plant can take root or grow therein, any more than such plants as sustain animal life can flourish in a soil which is filled with weeds either utterly unfit to eat, or deadly poisonous. It produces intellectual blindness, a disrelish for all wholesome mental food, and an inability to distinguish the good from the bad. The method of cure is: first, thoroughly to convince the sufferer of the true condition of his mind; and then to inspire him with an anxious, abiding desire to cure himself. This is a most arduous task; but one which must be undertaken by every intelligent farmer who sincerely desires to relieve from the curse of ignorance all such of his brethren as labor under it.

The next weed in my catalogue is *Pertinacia*, or, obstinacy. This almost always grows alongside the other, and is still harder to extirpate; for its roots are so strong and deep, its branches so much upon the *noli me tangere* order, that the most skilful investigator of such matters has never yet, I believe, discovered any method of rooting it out. Among the plants with which we agriculturists have most to do, there is not one that resembles it so much as our wheat when it takes what is called "*the stud*," and will move neither forward nor backward. The only chance of cure is, when it brings its victim into some intense suffering which forces upon him the conviction that it was caused solely by his persisting in some opinion or practice of his own, contrary to the opinions and practices of every body else. Even then, the relief (if any,) is but too often only temporary; for this weed seems, in some minds, to be as natural and ineradicable a growth as the next that I shall notice. This is *Philantia*, or, self-conceit; than which there is not, in the whole catalogue, a greater poisoner of the mental soil, nor one that more unfits it for the reception of any good seed. In fact, it disdains and rejects all attempts to impart them; for the sufferer from this cause, can hardly ever be made merely to suspect that he suffers at all; or that any one knows, or can possibly know, even half as much as he does, about any business in which he happens to be engaged. Nobody's experience but his own is worth a button to him; he looks upon himself as "*omnibus impar*," up to any thing he chooses to undertake, and far above being instructed either by men or books. That droll, quaint, and most amusing old writer, Burton, thus describes *Philantia*, in his "Anatomy of Melancholy:"—

"This pleasing humor,—this soft and whispering popular ayre, *Amabilis insania*,—this delectable frensie, most irrefragable passion, *Mentis gratissimus error*,—this acceptable disease, which so sweetly sets upon us, ravisheth our senses, lulles our soules asleep, puffes up our hearts as so many bladders, and that without all feeling, in so much *those that are misaffected with it never so much as once perceive it, or think of any cure.*"

I would give you still more on the same topic, from this truly original writer, together with his numerous and admirable illustrations of the effects of self-conceit; but neither time nor the limits of my letter will permit.

The two next mental weeds which I will notice, although entirely opposite in their effects, are equally injurious, equally hard to eradicate. Their Latin and English names are so much alike, that I shall call them only by the latter,—*Credulity*, and *Incredulity*. The effect of the first is to dispose the mind to a constant change of seed, without the power to discriminate between the good and the bad; and to suffer none to grow long enough to ascertain its real properties. The operation of the second is to keep the mind in what an illiterate blockhead of a congressman, whom I formerly knew, used to call "*the state of statu quo.*" In other words, it causes the mind to reject seed of every kind but that of its own choosing, and to which it has always been accustomed. Every new thing it derides, without examination, or treats it with the utmost scorn and contempt.

The last weed in my catalogue is *Sagnitia*, sloth or laziness. This operates on the mind nearly as dead palsy does on the body. For, although the former is not deprived of all sensibility, as is the latter, yet the mental feeling is so slight, even from the most stimulating appliances, that no sensible effect scarcely ever flows from them. If good seed are received at all, they will scarcely ever be sown; but *if sown*, they will never be cultivated in any such manner as to render the least service, either to the owner or to any body else. In short, the mind infested with this weed soon becomes nearly as incapable of intellectual effort as an oyster; and falls into a condition quite as hopeless as if it were at the same time filled with all the other weeds which I have described. Nothing but great bodily suffering will impel it to action, and as soon as that suffering is relieved, it instantly collapses into its former state of utter listlessness and torpidity.

You, gentlemen, and the rest of your brother editors throughout the United States, who have so laudably devoted yourselves to the great cause of American husbandry, and to whom I most cordially wish every success which your hearts can desire, may write and print to the end of your lives in behalf of that cause; but you may rely, with absolute certainty, upon what I now say,—that unless you can discover some method to rid our minds of all the weeds I have been laboring to describe, your efforts will have far less success than they well deserve to have. Just as soon might you expect to teach an elephant to dance on a tight-rope, or to make an honest man of a thorough-bred politician, as to make good farmers either of the wilfully ignorant, the obstinate, the self-conceited, the credulous, the incredulous, or the confirmed victims of sloth. Very few of them are within the reach of any curative medicine which agricultural papers can administer,—for the very best reason in the world, they will not *read* them. And were it possible to ascertain their present numbers, I fear we should find that, take them all together, they constitute little, if any, less than one-third of our whole class.

And now, Messrs. Editors, in bidding you farewell, permit me to assure you very sincerely, that I have no such feelings of paternity for this communication, nor shall I have for any other, should I ever address you again, as would lead me to desire its publication, unless you yourselves should really deem it worth publishing. On no other condition whatever do I wish to appear in your paper. I must therefore beg you to rest perfectly assured, that its non-admittance therein will "break no squares" between yourselves and your agricultural friend,

EXAMINER.

We can assure our friend Examiner who, by the by is one of the most distinguished leaders in the agricultural improvements of the present day, that nothing is more appropriate for the community than his home thrust description above, of the *mental weeds* that oppose such peculiar obstacles to agricultural advancement. But we can hope to eradicate them only by the *inductive* process. *What has not been reasoned in, cannot be reasoned out.* The only chance for success with them, is that the practices and improvements of their neighbors who do read and have capacity to apply their information, will gradually take the place of their own. When they find those, who have commenced under the same circumstances as themselves, by a more enlightened and judicious system of tillage, crops, new and improved varieties of seeds and animals, are getting rich while they are growing poor on their old and favorite systems—*then*, and then only can we hope to move them to the adoption of a wiser course.

For the American Agriculturist.

To breed Males or Females.

GENT:—The rule given at page 83 of your paper, for breeding male or female animals at pleasure, would often be convenient to farmers, if capable of certainty in practice. The experiments of a French breeder published a few years ago, seemed to make it probable, that at least in sheep, the sex of the progeny might be controlled, by the predominance of vigor in the animals bred from:—that by putting the ewes on low keep, and using vigorous rams of full age, a majority of the offspring would be males:—and that by using young rams to ewes of full age, the opposite result would be produced. At one time, I thought, I had confirmed this rule by my own experience in breeding cattle. In order to multiply the number of high bred cow calves, (a result much desired at the time,) I was careful to keep the cows in very good condition through the winter and early spring. My experience for *four* years gave tolerable proof that the rule was true, for of thirty-five calves produced in that time, 14 were bull calves and 21 were cow calves. But my experience of *nine* years induces the belief, that the theory has been deduced from the fortuitous results of particular years. In the human species, we know that the sexes are born in unvarying proportions, though nothing would seem to be more accidental than the sex of a child. We have no sufficient evidence to determine in what proportions, the sexes of cattle are produced, but I have no doubt that it is governed by laws as immutable as the proportions of the human sexes.

My stock registers will give you the following particulars, and I will observe that the cattle are kept on different farms—one a dairy stock of mixed blood—the other of high bred Short Horns kept for sale.

The total number of calves from these two herds up to this time amounts to 180—and of these 88 were bull calves and 92 were cow calves. They came as follows:—

First four years,	14 Bull Calves.	21 Heifers.
1838,	11 "	12 "
1839,	11 "	11 "
1840,	12 "	18 "
1841,	20 "	17 "
1842,	20 "	13 "
	—	—
	88	92

Among the heifers are classed two free martins. The condition of the animals through the whole time has been very uniform. The dairy stock being included in these results I give you the aggregate of the high bred cattle separately, viz: bull calves 22, cow calves 28.

Urbana, Ohio, July 7, 1842. J. H. J.

P. S. I see that you alluded to some committee who are charged with getting up the American Herd Book. Can you state who compose the committee, where they are to be addressed,—and the pedigrees are to be authenticated, and within what period may pedigrees yet be sent?

The results above we give with much pleasure from an intelligent and extensive breeder. We think they rather confirm *the rule* than otherwise, as the Short Horns, that probably occupied the attention of their owner more fully than the common stock, gave one fourth more females than males. But we suggested the principle for experiment, and must depend on experience alone to decide it.

We are not aware of any committee now collecting information as to pedigree of American Cattle, but hope to report one duly organized in a few months.

Blight in Pear and Peach Trees.

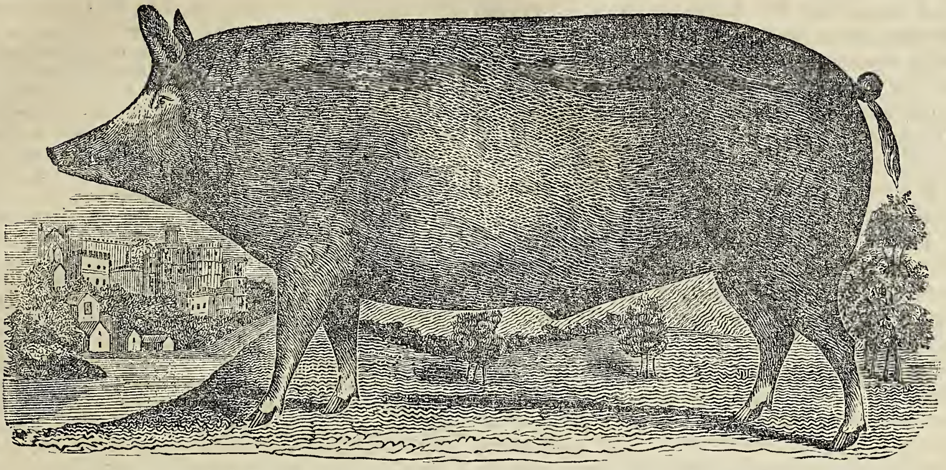
Our friend H. of Northampton, Mass., says:—

I think I have discovered the cause of canker, blight, or excresence on plum trees, so common in New England. My trees are more free from it than any in this place, which I attribute to their being more thoroughly pruned, by which the sun and air are more freely admitted. Excessive humidity and absence of free circulation in the top, I believe to be the *proximate* cause of the disease. When it appears, it must be immediately taken out with a sharp knife, or if the limbs are not too large, they should be cut off and burned, to prevent the future developement of the insects. I will examine this matter more particularly, by the aid of a microscope. Can you or any of your readers give the cause of blight in pear and peach trees? Some of my trees are full of spotted leaves, hard and slightly crisped. All the peach trees in this neighborhood have the leaves badly crisped, and the leaves are dying in consequence. The second growth of leaves, however, on the new shoots, seem to be doing better.

The above treatment of the plum, is identical with that of Mr. David Thomas, of Cayuga. His remarks on the Pear tree we subjoin, and shall be obliged to any of our correspondents to explain the causes of blight in the Peach tree.

" The Fire Blight in the Pear tree, which occurs early in summer, the leaves from the extremity of the branches for two or more feet, appearing as if they were *scorched.* We think however, that two distinct causes occasionally operate to produce similar effects, namely: insects, and a starting of the bark in winter.

" The late Professor Peck on examining the branch of a Pear tree which had died with fire blight, said the damage was caused by an insect (*Scolytus pyri,*) and that to cut off the limbs a foot or more below the dead part, and IMMEDIATELY BURN THEM, would be the proper remedy. We have faithfully followed this advice; and though the fire blight has been several times in the Fruit Garden, its ravages have always been arrested at once, so that we have not lost a tree from this cause in twenty years. We have believed that the new colonies went with us when we carried off and destroyed the branches."



The Property of J. Mahard, of Hamilton Co. and R. H. Hendrickson, of Butler Co., Ohio.

For the American Agriculturist.

Gent: We forward you for insertion, from the pencil of Charles Foster, Esq., Editor of the West. Farm. and Gard. at Cin., the portrait of the thoro'-bred Berkshire boar " Windsor Castle," imported from England last year by your A. B. Allen, and disposed of to us in November last.

He measures in a direct line, from the tip of his nose along his side, to the end of his hams, 6 feet 3 1-2 inches; from root of the ear to end of the hams, 5 feet 1 inch; height to the top of his shoulder, 2 feet 11 inches; do. to top of the rump, 3 feet; girth round the heart, immediately behind the fore leg, in fair working order only, 5 feet 6 inches; and if fattened, he would girth at least 7 feet, and stand 3 inches higher than he now does, as these animals always put much flesh on their backs in the fattening process; and it is estimated that he could be made to weigh 800 lbs. easily. It is not in his great size, however, that we claim peculiar excellence, but in his general fine points and handling, soft silky hair, thin skin, and quick feeding properties; and joined to all these, he has the bearing and action of a blood horse, and we are confident that his stock, like himself, will prove what is so essential here at the West, *first-rate travellers.* His coat is a deep rich plumb color, intermixed with a slight flecking of white and buff.

You will recollect asserting, that the largest dealers and best judges, in Berkshire, England, informed you, that they had not known so large and fine a boar in that county for 20 years, and without intending in the least to disparage the value of any other animal, we will say, that the same opinion is expressed by all who have seen him in this country. The most forward pigs that we have of his stock now, are about 5 months old; and we find, notwithstanding their increased size over any other Berkshires we have before bred, they fatten as kindly as those of the smaller sizes, and that this stock can be made ready for the knife at any age desired by its breeders.

Respectfully yours,
John Mahard, Jr. of Cincinnati, Ohio.
R. H. Hendrickson, Middleton, "
July 1, 1842.

We are indebted to our spirited friend, T. Affleck, Esq. recently editor of the Wes. Far. and Gard. for a long letter, and he will pardon us for extracting a paragraph which gives a graphic account of the climate and seasons of that favored latitude. It is dated Ingleside, Wash'n, Miss., June 30, 1842. He says—

As to health I have no fears. They tell me we have already had specimens of the hottest weather, and though the sun shines out intensely for a few hours in the day, there is such a fine breeze constantly stirring, that I feel the heat less than I have done north of the Ohio river.

You would be surprised at the advancement of the season. All who can are gathering their corn fodder, and I am preparing to cut up and shock this week and next. Oats and rye are all harvested, and corn, peas, &c., planted on the stubble, (turned in, of course,) a second crop of hay cut from the meadows of Bermuda grass; and many planters will commence cotton picking within four weeks. In the garden, spring and summer flowers are all gone, the dahlia having been the principal ornament for some weeks. Okra, tomatoes, Lima beans, &c., have lost their novelty weeks ago. Plums all gone. Peaches, melons, apples, pears, grapes, and figs, now in perfection; the last certainly the greatest luxury in the fruit line I ever partook of.

We are indebted to Mr. John Harland, of Guelph, U. C., for his letter of the 8th July. Of course we shall feel obliged by the portrait of his fine prize-boar, Wamba, accompanied with a description of the improved Yorkshire breed of Swine. For the present, Mr. H. says that Wamba weighs about 550 pounds, in good working condition, with fine skin, hair, &c. He took the first premium at the Agricultural show, in the Wellington District, last October. We shall take great pleasure in looking at him, in our contemplated tour north, as well as the fine Short-Horns, Leicester and South Devon sheep that he speaks of.

Mr. Stevenson, late editor of the Kentucky Farmer, has been deterred by ill-health from making us any communication. When shall we hear from Robert W. Scott, Esq., Colonel Williams, and many others ?

Mr. S. W. Jewett's description of sheep is received, with five specimens of Merino wool, and the portrait of his Paular buck, which sheared 14 *lbs. wool* in June last. We shall give it in our next.

LADIES DEPARTMENT.

For the American Agriculturist.

The Cultivation and Uses of the Raspberry.

There is but one variety we believe of this beautiful shrub, which is not useful for the table, and this, the (Rubus odorâtus) or rose-flowering raspbery, deserves cultivation in a favorable soil for its beauty, and we think, though we have never seen it cultivated, it would form a very ornamental appendage to the arbours and terraces of our flower gardens and grounds. It loves a moist and mountainous region, and jutting out, as we have seen it, by the side of a clear, welling stream, from the deep fissures of some lofty rock, or overhanging the flower-mantled precipice, with its rich, red petals and moss covered calyx, itself the brightest gem of the graceful coronet, we have thought this luxuriant plant scarcely to be surpassed in attractiveness. But our present subject has a reference more to the gratification of the palate than to the charming of the eye.

Much attention is now given to the cultivation of the Raspberry, and the numerous varieties of this agreeable fruit which have been constantly increasing and improving, give evidence that its culture well repays the trouble. Among these, we would specify particularly, the Ohio Ever-bearing Raspberry, which we believe ranks first; the Red, and Yellow or White Antwerp; the Purple Garden Raspberry (R. Idéus); the Grape Raspberry, which was raised some years ago from the seed of an imported plant, by a gentleman of Charlestown, Mass., and is a very large fine variety, but little known, bearing profusely, and resembling the Barnet; another fine variety, the Smooth Cane, or double bearing; the White American, (too much neglected); the common Red, and the Black American, or wild Raspberry, (R. occidentâlis). Of the Ever-bearing, you have already spoken in a previous number, but what little information I have been able to glean respecting it may not be uninteresting, in this connection, to some of your readers. As your correspondent has there remarked, it was "first discovered fifteen years since in the northern part of Ohio, near Lake Erie," and by the lovers of this fine fruit, it is considered superior to any other variety, being larger, bearing earlier, and having a superior flavor, with this peculiar advantage, that, after the usual season of bearing on the wood of the previous year, the young shoots begin to bear successively, affording thus a supply of fruit till vegetation is checked by the chilling frosts of autumn. The fruit, Mr. Carpenter remarks, is not unlike "the wild Black Raspberry, but larger, and of finer flavor." It is also longer and of a dark purple, which at first induced some to fancy it a variety of the Purple Garden Raspberry, as also from its character of self-propagation from the shoots when low enough, turning into the ground. By many, familiar with both the Ever-bearing and the Antwerp, who do not approve the peculiar flavor of the latter, the former is judged preferable. Except by the Shakers of Warren Co. Ohio, and their brethren at Warrenville, near Cleveland, and by Mr. Longworth of Cincinnati, and a few other western gentlemen, we fear it has as yet been little appreciated, although our own experience has proved the Purple Garden Raspberry, if indeed it be not a variety of the same, to possess many of its descriptive traits. This, the (R. Idéus,) is a late bearer, continuing in blossom and fruit until the last of autumn, having no suckers, but propagating itself when bending close to the ground, although it is judicious to assist nature by selecting the more vigorous shoots and inserting them into a hole made for the purpose, and then pressing the earth gently around them. It is also remarked of the Ever-bearing Raspberry, that the second crop is superior to the first, and certainly with all its other advantages, it is singular that it should have been entirely overlooked by botanists, conspicuous as it is, moreover, for its large white flowers, which appear in clusters on the same shrub, already drooping with its luxuriant harvest of luscious fruit. We hope our eastern horticulturists will think this variety worthy of their attention, if as yet it has received no notice from them. The common wild Red Raspberry we have cultivated to some extent, and though we have not found the delicious flavor of this fruit in its native state, materially increased by cultivation, yet we have observed it continues in bearing much later than its compeers of the fields and woods. From a dozen three year old plants, we have for as many years, gathered at least a pint every day or two, till late in October, after the harvest season had gone by. We cannot say much, 'tis true, for the flavor of the very late ones, partaking as they do, too much of the tart, but we have thought in a warmer climate, away from the lakes, say in the interior of the state, every variety of the native raspberry might, with proper care, be improved, and possess perhaps, with cultivation, this same property of bearing late. We are advocates however, in all things, for giving our labor first to that which profiteth most, and therefore, when they can be procured, we would recommend the cultivation first of the most productive and valuable varieties; the native fruits always being a commodity of the market, and indeed their place is hardly to be supplied for sweetmeats, jams, &c. But there may be some that can procure no other, who would find it for their convenience to *transplant* the raspberry in its native state, which may be done as early as possible after the fruit is gone, although at any time they may do so with propriety from July until the frost sets in, which, by putting an end to all garden preparations for another year, reproves the laggard for his procrastination. This requires but little labor and expense, other than that of time, for which an equivalent is returned the following season in an abundant supply of delicious and wholesome fruit for family use. *Before planting*, the ground ought to be well dug and manured, and the plants placed at considerable distances apart. It is well to select moist weather for this purpose, and if, after planting, the weather is dry, the plants should be daily watered until they have taken root. As soon as possible too, after the ripening and disappearing of the fruit, cut down the old wood below the surface of the ground, as it bears but one year, and after removing the superfluous suckers, reserve 3 or 4 of the more vigorous shoots around the parent one, to bear the following year. These shorten, and then carfully lay them down upon soil raised to prevent their breaking, and cover them with a few inches of light soil. Soon after the frost has left the ground in the spring, raise the plants, and if they are slender or exposed to the wind, either tie them together, or confine them to stakes. In this manner, with proper attention to have them occasionally hoed around and freed from weeds and grass, one plantation may be kept in fine bearing for 6 or 7 years, by which time a younger growth of shoots previously taken from the side of the older plants might be ready to succeed to their place in contributing so desirable a luxury for the future use of the family.

I subjoin some recipes for the uses of the Raspberry, and some other things, which I can recommend from my own practice, that you can insert if you deem them of sufficient consequence.

ELLA.

We can assure our fair Correspondent, we consider the cultivation of the Raspberry, on which she has given us so instructive and agreeable a communication, and the following Recipes also, as well meriting attention as the *indefinite multiplication* of the more substantial productions of the farm, and we give them a place with great pleasure. As we have not seen them before, we presume the recipts are original.

Loudon, in treating of the Raspberry, says "The Syrup is next to the strawberry in dissolving the tartar of the teeth, and as like that fruit, it does not undergo the acetous fermentation in the stomach; they are therefore recommended to rheumatic and gouty patients." The raspberry is also useful in the confectionary department, forming an excellent fruit for tarts, jams, and sweetmeats, and when properly prepared as a syrup, and diluted, makes a delicious and refreshing beverage, very cooling and safe in fevers.

Raspberry Syrup.—To every quart of fruit, add a pound of sugar, and let it stand over night. In the morning boil and skim it for half an hour; then strain it through a flannel bag and pour into bottles, which must be carefully corked and sealed. To each bottle, add if you please a trifle of brandy, if the weather is so warm as to endanger its keeping.

The same recipe answers for *blackberries.*

Raspberry Jam.—1 lb. Loaf or White Havana Sugar, to every pound of fruit—bruise them together in your preserving pan with a silver spoon, and let them simmer gently for an hour. When cold, put them into glass or china jars, and lay over them a bit of paper saturated with brandy—then tie them up so as carefully to exclude the air. They will keep a year, and are better than if made after the old method, with the addition of currant jelly.

Ginger Beer.—One pint molasses and two spoonfulls ginger, put into a pail to be half filled with boiling water—when well stirred together, fill the pail with cold water, leaving room for one pint of yeast, which must not be put in until luke-warm. Place it on a warm hearth for the night, and bottle it in the morning.

Beer, (from a Lady of Weathersfield, Conn.)—20 drops of the oil of spruce, 20 do. wintergreen, 20 do. Sassafras. Pour two quarts of boiling water upon the oils, then add eight quarts of cold water, one pint and a half of molasses, and a half pint of yeast. Let it stand two hours and then bottle it.

Rennet or Wine Custards.—Very simple, and prepared in five minutes. Cut a bit of Rennet about 4 inches square into strips, which put into a bottle filled with wine. It will be fit for use in two or three weeks. To make your custard, first *warm* and *sweeten* the milk, then stir into it a tea spoonful or table spoonful of the rennet wine, according to its strength, and pour immediately into a pudding dish, or cups, as you prefer—put away in a cool place for an hour, and grate nutmeg on them. The whey, of which you can make enough, by the addition of extra wine when you prepare it, is a very nourishing drink for invalids.

Tomato Catsup.—To a gallon skinned tomatos, 4 table spoonfuls salt, 4 do. black pepper, half a spoonful alspice, 8 red peppers, and 3 spoonfuls mustard. All these ingredients must be ground fine and simmered slowly in sharp vinegar 3 or 4 hours. As much vinegar is to be used as to leave half a gallon of liquor when the process is over. Strain through a wire sieve and bottle, and seal from the air. This may be used in two weeks, but improves by age, and will keep several years.

Dr. Rush's Cure for persons who have drank imprudently of cold water or any cold liquid when too much heated. Doses of *liquid laudanum* proportioned to the violence of the attack. From a tea spoonful to near a table spoonful has been given before relief has been obtained.

The best and most simple ricipe for preserving Eggs.—Pack them during the summer and fall for winter. Take a stone crock or firkin, and put in a layer of salt, half an inch deep—insert your eggs on the *small end*, and cover each layer of eggs with a layer of salt. If the eggs are fresh when packed, and put into a cool dry place, they will keep perfectly good until the following summer.

Boil Salsify or *Vegetable Oysters* till the skin will come off easily. When you have taken it off neatly, cut the roots in bits as long as an oyster; put into a deep vegetable dish a layer of crumbs of bread or crackers, a little salt and pepper and nutmeg, and a covering of butter as thin as you can cut it; then a layer of oysters, till your dish is filled, having crumbs at top. Fill the dish with water, and brown them handsomely. They can remain two hours in the oven without injury, or be eaten in half-an-hour.

Indian Meal Cakes.—To three pints of indian meal, a piece of butter as large as an egg, and a teasponful of salt. Put two teacupsful of boiling water, stir it in, then add three eggs, and milk to make it to the consistency of batter. Half a teaspoonful of saleratus.

Whooping Cough.—A teaspoonful of castor oil to a tablespoonful of molasses: a teaspoonful of the mixture to be given whenever the cough is troublesome. It will afford relief at once, and in a few days it effects a cure.

The same remedy relieves the croup, however violent the attack.

SELECTIONS.

Wheat.—The minor varieties of any species of wheat are not permanent in their character, though, under given conditions, they will remain unchanged for an indefinite period. Under other circumstances, however, they degenerate; and hence particular kinds that were once valued, have now ceased to be so. The best advice that can be given, therefore, in the choice of varieties and sub-varieties, is to select those which the practice and experience of the principal farmers of the neighborhood have stamped as the best. Colonel Le Couteur, one of the best authorities on the culture of wheat, has given us the result of his experiments and great experience, upon four of the best pure and improved varieties of wheat lately introduced into England.

1. *White downy.*—This excellent variety is believed to be the same that is so well described by Boys, in his *General View of the Agricultnre of Kent*, as the "Hoary White," or "Velvet-eared," said by him to have been much prized by the millers, but then entirely lost. The seed, after being washed and steeped, was sown in drills seven inches apart, at the rate of two bushels or a little more to the acre. The wheat was carefully hand-hoed in the month of May, which caused it to tiller freely. The preceding crop was potatoes. This wheat will withstand the most severe weather. The season 1837 to 1838 was a very trying one, both as to wetness and severity of cold, the thermometer having fallen to 18° below freezing; but the crops of this wheat raised by my neighbors were perfectly insensible to it, and of great produce. This wheat is not remarkable for its early maturity, though it cannot be called a tardy variety. It is not subject to degenerate, and if attention is paid to sowing the seed pure, and annually, or even occasionally, varying the manure intended for it, it is possible it may never degenerate. The only objection to it is the huskiness or velvety ear, which in damp weather is retentive of moisture; and in snatchy seasons the grain is more apt to sprout than the smooth-chaffed varieties. It is not much affected with dust-brand; and when pickled and limed, has never been found with smut-balls. It is little liable to shed, even when over-ripe, and will resist very heavy gales without being laid or broken.

2. *Jersey Dantzic.*—The seed is described as having been raised from a single ear, originating from seed procured from Dantzic, selected from the finest "high mixed." It is, however, suspected to be identical with some excellent sorts, called in Sussex, Kent, and some parts of Surrey, the "Chittums;" in other parts, "Peglesham;" in Berkshire, "Trump;" in Essex, "Hardcastle;" in some counties, "Old Suffolk;" in Scotland, "Hunter's White;" and assuming several other names. This wheat is not quite so hard as the "hoary;" it is, nevertheless, considered sufficiently so to succeed throughout the kingdom, excepting the northern parts of Scotland. In rich soils it tillers amazingly, and produces a longer straw than the hoary, nor is it so liable to sprout in a moist climate, from being smooth-chaffed: in very severe, moist, and stormy weather, it will be laid sooner than the hoary.

It ripens a week earlier, at least, than the variety last described, and should be reaped while the grain can be marked by pressure from the thumb-nail, as it is rather liable to shed if over-ripe, a disadvantage which the hoary is peculiarly free from, as it is tenacious to the ear. In a dry season, this wheat will afford a beautiful, clean, white straw, fit for bonnet-making, or any purpose of thatching: it is firm and tenacious. In wet seasons it is rather subject to rust, which, under such circumstances, almost all wheat suffers from.

3. *Whittington Wheat.*—The seed was obtained from Mr. Whittington himself, and was a very fine pure sample. The grain is large, full, and plump, rather of a whitish-red cast, and a little thick-skinned. The seed was washed, pickled, drained, and limed, then sown in drills seven inches apart, about three bushels to the acre. When the seed is large, it is considered prudent to add half a bushel or more to the acre. I consider this to be a very hardy wheat, affording much herbage and straw, very fit for being eaten down by sheep in the spring, when sown early in the fall. The Whittington is rather a late wheat, ripening a week or ten days later than the Jersey Dantzic before described, though it was in bloom on the same day. From the purity of the seed, and the uniform appearance of the crop, it does not appear likely to degenerate, nor does it seem more liable to disease than other wheats. The straw is brittle, and many ears break off. I am of opinion, from what I have witnessed, that the value of this description is much over-rated: the millers dislike it, and in certain situations it is apt to blight.

4. *Bellevue Talavera.*—This admirable variety is invaluable where it is adapted to the soil and climate. The seed being large, a greater quantity of it should be allowed than usual. This wheat has succeeded in the north of Scotland, and is sufficiently hardy to withstand the winter in its grassy state, but it is otherwise more valuable as a spring crop: without doubt it may be sown as late as the first week in February in all the milder parts of England, with a prospect of reaping quite as good an average crop from it as from any other wheat, but with a certainty of obtaining more flour than from most. There is no tendency to degenerate observable in this wheat, as far as the experience of five or six years goes; nor, from its early habits, is it at all likely to become intermixed by fecundation from other varieties, though sown about the same period, as it will, in such cases, flower a fortnight or three weeks before them. It is not more liable to disease than ordinary white wheats, and affords a very fine clear white straw: it is, indeed, one of the Italian bonnet-making varieties. There is, however, one disadvantage in it, which is, that the ear is so heavy that it is apt to break down, though not break off, when swept by a gale about the period of ripening; but it has a countervailing good quality, of ripening the grain equally well though bent down; as is the case with spring wheats, which ripen their seed well though quite laid, which with winter wheats is doubtful. Another peculiarity is the tenacity of the chaff to the ear, more remaining on it after passing through the threshing-machine than any other variety I am acquainted with.—*Johnson's Encyclopedia.*

Pulverizing the Soil.—To demonstrate that dews moisten the land when fine, dig a hole in the hard dry ground, in the driest weather, as deep as the plough ought to reach; beat the earth very fine, and fill the hole therewith; and after a few nights' dews, you will find this fine earth become moist at the bottom, and the hard ground all round will become dry. Till a field in lands: make one land very fine by frequent deep ploughing, and let another be rough by insufficient tillage alternately; then plough the whole field crosswise in the driest weather, which has continued long, and you will perceive, by the color of the earth, that every fine land will be turned up moist, but every rough land will be dry as powder from top to bottom. In the driest weather, good hoeing procures moisture to roots; though the ignorant and incurious fancy it lets in the drought, and therefore are afraid to hoe their plants at such times.

There is yet one more benefit hoeing gives to plants which by no art can possibly be given to animals: for all that can be done in feeding an animal is, to give it sufficient food at the time it has occasion for it; if you give an animal any more, it is to no manner of purpose, unless you could give it more mouths, which is impossible; but, in hoeing a plant, the additional nourishment thereby given enables it to send out innumerable additional fibres and roots; so that hoeing, by the new pasture it raises, furnishes both food and mouths to plants.—*Tull.*

Barley from Hudson's Bay.—Our readers may well be surprised to hear of barley from Hudson's Bay; we were, certainly. That a country so far north as to be almost perpetually covered with ice and snow, and seldom trodden save by the bear and the Esquimaux, should produce this grain, is not a little singular. Such seems to be the fact. Messrs. Newberry and Dole, of this city, have for sale some thirteen or fourteen barrels of barley, the grains of which are so unusually large that they attract instant attention. They are full and plump, and nearly double the ordinary size. This barley was raised at Green Bay, the seed from which it sprung having been brought from Hudson's Bay. It is said that a crop of this description of barley can be harvested in eight weeks from the time it is sown. This would be about the duration of summer in the neighborhood of Hudson's Bay. It is evident, then, that this species of barley is admirably calculated for our latitude. Not only would an unusually valuable crop be produced in an unusually short space of time, but two crops could be easily raised in one season.—*Chi. Am.*

Statement *of J. T. Lansing for making Butter which received 1st Premium from N. Y. State Ag. Soc., in* 1841:—

1. The number of cows kept is ten.
2. Keep them stabled through the inclement season; feed them from three to four times per day with good hay or green stalks; when near coming in, add some oats, barley, or corn cracked. In summer, good pasture, with living water accessible at all times, and plenty of salt.
3. Treatment of milk and cream before churning.—Strain the milk in tin pans; place them in a cool cellar for the cream to rise. When sufficiently risen, separate the cream from the milk; put it in stone jars, well prepared, before churning.
4. The mode of churning in summer.—Rinse the churn with cold water; then turn in the cream, and add to each jar of cream put in churn, full one-fourth of the same quantity of cold water. The churn used is a patent one, moved by hand with a crank, having paddles attached, and so constructed as to warm the milk, if too cold, with hot water, without mixing them together. The milk and cream receive the same treatment in winter as in summer; and in churning, use hot instead of cold water, if necessary.
5. The method of freeing the butter from the milk, is to wash the butter with cold water till it shows no color of the milk, by the use of a ladle.
6. Salting of the butter.—Use the best kind of Liverpool sack salt; the quantity varies according to the state in which the butter is taken from the churn; if soft, more, if hard, less, always taking the taste for the surest guide. Add no saltpetre, nor other substances.
7. The best time for churning is the morning, in hot weather, and to keep the butter cool till put down.
8. The best mode of preserving butter in and through the summer and winter, is as follows:—The vessel is a stone jar, clean and sweet. The mode of putting it down is to put in a churning of butter, and put on strong brine; let it remain on until the next churning is ready to put down, and so on till the jar is filled; then cover it over with fine salt, the same to remain on till used.

Statement *of Wm. Merrifield, received 2d Premium, as above*:—

Number of cows.—Eight.

Mode of keeping.—In pasture, in summer; on hay, straw, and roots, in winter.

Treatment of cream and milk.—Milk strained into tin pans, and placed in the cellar.

Mode of churning.—The cream only churned, in a Dutch churn.

Method of freeing the butter from the milk.—By pressure.

Quantity and kind of salt.—Liverpool sack, one ounce to the pound.

Best time of churning.—Morning, in summer.

Best mode of keeping.—In the cellar, in summer, in wood.

In winter, our milk stands twelve hours; is then removed to the stove, and scalded over a slow fire to near boiling heat; the pans removed to the cellar to cool; the cream only churned. The butter, placed in the coldest part of the house, will keep good any length of time.

Statement *of H. P. & G. Allen, who received 1st Premium for making Cheese, from N. Y. State Ag. Soc., in* 1841:—

Number of cows kept, eleven. Cheese made from two milkings, in the English manner; no addition made of cream. For a cheese of twenty pounds, a piece of rennet about two inches square is soaked about twelve hours in one pint of water. As rennets differ much in quality, enough should be used to coagulate the milk *sufficiently* in about forty minutes. No salt is put *into* the cheese, nor any on the outside during the first six or eight hours it is being pressed; but a thin coat of fine Liverpool salt is kept on the outside during the remainder of the time it remains in press. The cheeses are pressed forty-eight hours under a weight of seven or eight cwt. Nothing more is required but to turn the cheeses once a day on the shelves.

Statement *of D. Marvin, who received 2d Premium for Cheese*:—

The milk strained in large tubs over night; the cream stirred in milk, and in morning strained in same tub; milk heated to natural heat; add color and rennet; curd broke fine and whey off, and broke fine in hoop with fast bottom, and put in strainer; pressed twelve hours; then taken from hoop, and salt rubbed on the surface; then put in hoop, without strainer, and pressed forty-eight hours; then put on tables, and salt rubbed on surface, and remain in salt six days, for cheese weighing thirty pounds. The hoops to have holes in the bottom; the crushings are saved, and set and churned, to grease the cheese. The above method is for making one cheese per day.

Tincture of Roses.—Take leaves of the common rose, (*centifolies*) place them, without pressing them, in a bottle, pour good spirits upon them, close the bottle, and let it stand until it is required for use. This tincture will keep for years, and yield a perfume little inferior to otto of roses. A few drops of it will suffice to impregnate the atmosphere of a room with a delicious odor. Common vinegar is greatly improved by a very small quantity being added to it.—*German paper.*

Brittania Ware should be first rubbed with a woollen cloth and sweet oil; then washed in water and suds, and rubbed with soft leather and whiting. Thus treated it will retain its beauty to the last.

NEW PUBLICATIONS.

"Farmers' Encyclopedia, by Cuthbert W. Johnson. London, 1842." We have received the concluding number of this highly valuable work, which has been in course of publication for the last year. It is intended to give general views on the various subjects of which it treats, and it will be found to contain a large amount of valuable information, though some subjects might be omitted entirely, and many more curtailed, without detriment to the American reader. It will have been noticed we have made selections from it for the previous numbers, as well as the present, of our work. The style is pleasing and popular, the arrangement judicious, and the matter well-selected and ably treated, either by the editor, or the best writers from whom he has selected. We presume, from the decided merits of the work, it will be republished in this country; and we trust the publishers, whoever they may be, will thoroughly digest their plan, before submitting it to American readers.

"The Dollar Farmer," published monthly by Prentice and Weissinger, Louisville, Ky. We have received the first number of this new periodical, devoted entirely to the farmers' interest. It is a neatly-executed monthly, of 16 pages, quarto, and is well filled with editorial and selected matter, adapted to the general interests of agriculture. We hope to see the circulation of sterling agricultural works extended, till one or more copies shall be found in the hands of every farmer of the U. States.

New Work.—"The Farm House of the 19th Century, or Encyclopedia of Practical Agriculture. With more than 2,000 Engravings. New York, S. S. Haskell, 138 Fulton street, 1842." The first No. of this work has been sent us. It is to be published in forty semi-monthly Nos., of 48 pages; 25 cents each. It is a translation from a recent French work of conceded merit, being a compilation on the various subjects of agriculture as understood and practised in France, by several of their most scientific agriculturists. The translator has, in a spirited preface, well set forth the necessity of enlarged information among the farmers of this country; which the work is well calculated to afford.

Several books on agricultural subjects were handed in too late for notice in this No.; they will appear in our next.

EDITOR'S TABLE.

Directory for Fairs in 1842.

☞ Those sending notices of Fairs will please to observe, that if sent us printed in a *newspaper*, they subject us to no postage; if sent in a *handbill*, they will cost us *letter postage*.

N. York American Institute, to be held in the city of New York. Gen. James Talmadge, Pres't; T. B. Wakeman, Cor. Sec.

N. York State Society, at Albany, Sep. 28th and 29th. James Wadsworth, Pres't; H. S. Randall, Cor. Sec.; L. Tucker, Rec. Sec.

Oneida County, at Rome, Oct. 12th and 13th. P. Jones, Pres't; E. Comstock, Cor. Sec.; R. S. Doty, Rec. Sec.

Rensselaer County, at Lansingburgh, first week in October. Joseph Hastings, Pres't; Giles B. Kellogg, Sec.

Ontario County, at Canandaigua, 12th and 13th Oct.

Erie County, at Buffalo, 5th and 6th Oct. L. F. Allen, Pres't; Warren Bryant, Sec.

Monroe County, at Rochester, Oct. 13th and 14th.

Genesee County, at Batavia, Oct. 20th and 21st.

Onondaga County, at Syracuse, Oct. 5th and 6th.

Seneca County, at Waterloo, Oct. 20th and 21st.

Wayne County, at Palmyra, Sep. 5th and 6th.

Tompkins County, at Ithaca, Oct. 6th and 7th.

Livingston County, at Genesee, Oct. 4th.

Union Ag. Soc., at Aurora, Kane County, Ill., 19th Oct. J. T. Gifford, Pres't; J. S. Wright, Cor. and Rec. Sec.

New Haven County, at New Haven, Sep. 28th and 29th. B. Silliman, Pres't; Henry Whitney, Sec.

The Wellington U. Canada Fair, at Fergus 4th Oct., at Berba 7th; at Guelph 11th.

The Gore District U. C. Ag. Soc., at Dundas, 13th Oct.

The Royal English Ag. Soc. was to hold its annual cattle show at Bristol, commencing July 14th.

Geo. Reed, Esq., Cor. Sec. of Wisconsin Ag. Soc., in his letter dated 23d May, says:—

Will you allow me to suggest the enlargement of your statistical table on agriculture, in some future No.; bringing into connexion with what is already published, other equally important information, which, I presume, can be found in the census returns, &c. &c. &c.

We should most gladly increase this kind of information to a large extent, could we procure such as could be relied on for this purpose. But many of those obtained in the last U. States census, were grossly inaccurate, and were corrected with much labor and investigation, subsequently, at the Patent office, in Washingtsn. We trust that competent men hereafter may be appointed to this office, who have capacity to understand their duty, and integrity and character to execute it; not mere political machines, as they not unfrequently are. We should then possess an immense amount of information on all matters relating to agriculture and political economy, of incalculable value to the statesman and philanthropist.

Silk Cocoons.—For the benefit of silk-growers throughout the country, we mention the fact, that our state authorities at the Sing-Sing State-prison are paying $3 per bushel for cocoons. There was a difficulty in disposing of the article in some parts of the country, last season, owing to the want of machinery or skilful persons to manufacture it. This last branch of industry ought always to be added to the former, as it affords employment to the women and children of the family during a portion of the year when their labor would be of little value for other purposes. We intend giving a simple manual on this subject soon.

We understand extensive preparations are making for the manufacture of silk, by our state convicts; it being a branch of business not coming in conflict with the *voluntary* labor of our artisans to any extent; though we hope soon to see a rebellion of *our silk manufacturers*, (we have yet to manufacture *them*,) against the monopoly of their craft.

Sheep husbandry is attracting considerable attention at the present moment, particularly at the South and West; and to the many inquiries addressed to us upon it, we beg leave to answer, that we are daily looking for essays on this subject from two valued friends, who to practical and experienced acquaintance as breeders in our own country, join the advantage of extensive travel and observation in different parts of Europe. In the mean while, we say:—

1. If the production of wool is the object, take the Merino and Saxon; and, if possible, procure Rambouillet and Paular rams to cross on the first, as they are the largest and most superior class of animals we know, they being originally derived from the same source, viz., the Merinos of Spain.

2. If delicate mutton is wanted, with a medium fibre of wool, take South Downs.

3. If larger mutton, with somewhat coarser quality of wool than the last, though much longer and more of it, is desired, procure Cotswold, Leicester, Bakewell, Lincoln, or New Oxford.

4. Many of those who have crossed the South Downs with the Leicester and the other long woolled sheep, prefer these, for the reasons stated in No. 2 of our Tour in England.

5. Others in this country greatly prefer a cross of the Leicester with the Merino, half and half, and then breeding those grades together. Their reasons in favor of this cross are these:—1st. It gives a large sheep, with plenty of mutton. 2d. A large fleece of wool, and of sufficient fineness for all purposes of domestic manufacture, and gets rid of the troublesome length of the pure Leicester. 3d. The animal is in good shape, good constitution, thrifty, hardy, and comes to maturity one year sooner than the Merino; has nothing of his rugged appearance, and has little or no gum in his wool.

The subject of mixing fine and coarse woolled animals, has been pretty thoroughly tried by Lord Western, and other eminent breeders, and though pursued with great enthusiasm, has not met, as we understand, with very marked success. But this is a fanciful matter, and has nothing to do with the plain, practical farmer, who takes his half-and-half cross, and is satisfied with a useful animal. We have seen beautiful, and, we will add, almost perfect, specimens of the cross of the South Down, as well as the Merino, with the Leicester, uniting all the essential good qualities of the two, without their defects; and we can only say, when they have been successful, and these crosses meet the views of the breeders making them, we advise a continuation. Different persons and localities, require and must have different animals to suit them.

We notice that very agreeable and instructive agricultural writer, Doct. M. W. Phillips, of Mississippi, has joined the Western Farmer and Gardner, as assistant editor. He has for several months been among its most able contributors, and we heartily congratulate the readers of this valuable work, upon the additional interest that will hereafter be given to it.

Saltpetre.—Our friend, Mr. Benedict, of Staten Island, in accordance with our suggestion of soaking his seed corn in saltpetre, having prepared his seed, ordered it to be planted. But, in his absence, a neighbor, who *is a decided opponent of book farming*, saw what his son was about, and advised him to throw away his corn, as it would never come up. This was done, and the balance of the field planted with unsoaked seed. Mr. B says, that the corn from the nitrated seed is now *twice* as large and thrifty as the remainder of the field. When will our hard working, well meaning farmers learn that a vast amount of money may be made, without additional effort of personal labor, by consulting sound practical agricultural works?

Tar for greasing wagons, we think an absurd article. In the hottest weather it soon gums up and becomes adhesive, and in cold weather is always so. Wherever iron axletrees are used, *black lead* mixed with grease is best:—or *Flour* mixed with *Lard*.

REVIEW OF THE MARKET.

Prices Current in New-York, July 28, 1842.

ASHES, Pots, per 100 lb.	$5 25	to 5 50
Pearls, do.	5 62	5 69
BEESWAX, Yellow, per lb.	28	30
COTTON, Louisiana, do.	5½	10
Upland, do.	5	9
Florida, do.	5	8
Alabama, do.	5½	10
FEATHERS, American, live, per lb.	25	33
FLAX, American, per lb.	8	8½
FLOUR, Northern and Western, via Erie Canal, per bbl.	5 94	6 00
do. via N. Orleans,	5 75	5 88
Southern, per bbl.	5 75	5 88
RYE, per bbl.	3 88	4 00
MEAL, Corn, per bbl.	2 81	3 00
do. per hhd.	14 00	14 25
WHEAT, Western, per bushel,	1 27	1 30
Southern, do.	1 26	1 30
RYE, Northern, per bushel,	68	70
CORN, do. do.	59	61
Southern, do.	54	55
BARLEY, per bushel,	60	62
OATS, Northern, per bushel,	31	33
Southern, do.	28	31
PEAS, Green, do.	91	1 12
BEANS, White, per bushel,	1 20	1 40
CLOVER SEED, per lb.	7¾	8¼
TIMOTHY SEED, per tierce of 7 bu.	13 00	14 00
FLAX SEED, rough, do. do.	10 50	11 00
clean, do. do.	12 00	12 50
RICE, per 100 lb.	2 50	3 00
HEMP, Russia, per ton,	215 00	230 00
American, do.	—	—
HOPS, first sort, per lb.	11	14
LEAD, Pig, per lb.	3¼	3½
Sheet and Bar, per lb.	5½	—
OIL, Linseed, American, per gal.	82	88
PLASTER OF PARIS, first quality, per ton,	2 25	2 75
unground do.	2 00	2 12½
BEEF Mess, per bbl.	7 25	8 00
Prime, do.	2 50	3 00
Cargo, do.	1 75	2 00
PORK, Mess, do.	8 00	9 00
Prime, do.	5 37½	6 50
LARD, per lb.	6½	7½
BUTTER, best Table, per lb.	15	19
Western, good, per lb.	10	11
Shipping, do.	6	7
CHEESE, in boxes and casks, per lb.	6	6½
HAMS, Smoked, per lb.	5	6
Pickled, do.	4	4½
Shoulders, smoked.	3½	4
BEEF, Smoked, do.	5¼	6½
SALT, Liverpool, ground, sack	1 15	1 20
do. fine, do.	1 60	1 65
SUGAR, New Orleans, per lb.	3	6
TOBACCO, Virginia, do.	2	6
Kentucky, do.	2½	6½
TALLOW, American, do.	7½	8
WOOL, American Saxony fleece, per lb.	36	38
Full blood Merino do. do.	28	35
Half to three-fourths do. do.	25	30
Native to half do. do.	18	25
SHEEP PELTS, each,	20	50
HAY, new, per 100lb.	50	75
old do.	62	87
POTATOES, new, per bushel,	40	44
EGGS, per 100,	1 00	

Remarks.—July 28th.—But little change has occurred since our last. The receipts of flour have not been large, but in anticipation of the large crops soon to be brought into market, the holders are not quite as firm. A slight demand has occurred for shipments. Without a large and steady export, prices must soon recede materially. Small parcels of fresh southern flour, choice brands, have brought 7 dollars. Corn is quite plenty, and prices have gone down.

Pork has slightly advanced—first quality of Mess is held firmly at 8 dollars, and **Bacon** and **Lard** is rather higher.

Butter and Cheese are plenty, and prices declining.

The Crops of Grain and Grass have been gathered throughout a large portion of the country, and almost everywhere good and substantial. The Wheat has been slightly affected with rust in some places, but though we can learn of no section where the crops have been essentially diminished by this cause, we hear almost every where of greatly increased production.

Cattle Markket.—800 Cattle in market, including what were left over last week, of which $5 50 to 6 dols. was the general range, but choice went above and inferior below these prices. 2500 **Sheep** and **Lambs**, of which 200 were left over. Sheep, 1,50 cts. to 4 dols.; Lambs from 1 dollar to 1 dollar 75 cents; 50 Cows and Calves all sold at 20 to 30 dols.; Veals 2 to 8 dollars each; **Hogs**, 3 dollars to 3 dollars and a half, live weight.

☞ In consequence of the removal of the former publisher of this paper to England, it will hereafter be published by Messrs. SAXTON and MILES, booksellers and publishers generally, at No. 205 Broadway. All letters on business relating to the Am. Agriculturist, should be addressed, POST PAID, to them.

SAXTON & MILES,
PUBLISHERS AND BOOKSELLERS,
205 BROADWAY—NEW YORK.
Wholesale and Retail Dealers in Standard, Theological, Classical, Agricultural, Health, Miscellaneous and School Books.

S. & M. intend keeping a full supply of all works relating to Agriculture and its improvement, and to the sciences connected therewith; and to make their store a Depot, where the Farmer especially can find any thing he may wish, whether pertaining to his business or otherwise; and also where he can send his orders for books, with the confidence that they will be promptly and faithfully attended to.

C. M. Saxton,
E. E. Miles.

THE HEALTH ALMANAC FOR THE YEAR 1843.—*Devoted to the Law which regulates the animal, originally designed for the Spirit of Man—By a* Vegetable Eater.

CONTENTS.—Equinoxes and Solstices..Eclipses in the Year 1843—Calendar. with Maxims on Health, Law, Policy and Mind —Agricultural Statistics of the U. S. by Hon. H. L Elsworth—Mastication—Life—Milk—Nothing made in vain—The Stomach and Internal Canal—Worms in Living Creatures—On Swine's Flesh as food—Original Food of Man—Relation of Man and Wife —Relation of Parent and Child—Preparation of Bread Stuff—Bread Making—Head Ache—Life and Death—Formation of the Teeth—Bankrupts—Eating—Query answered—Disease and Pani —Bathing—Sleep—Dreaming—General Differences of the Sexes of the Animni and Vegetable Kingdom—Rates of Postage, &c.

Published by SAXTON & MILES, 205 Broadway—price 6 cents single copy; 37 1-2 cents per doz.; $2 50 per 100; 20 dols. per 1000,

Important Sale to Agriculturists.
IMPROVED SHORT HORN DURHAM CATTLE
On Thursday, the 8th September,

At 10 o'clock, will be sold at public sale, at the Exhibition ground of the Philadelphia Agricultuaal Society, Rising Sun, on the Germantown Road, 3 miles from the city, a choice selection of splendid DURHAM DAIRY STOCK, from the herd of James Gowen, Esq., of Mount Airy, consisting of imported Cows, young Bulls and Calves, from Dairy Maid, Pochontas, Victoria, etc., and by the celebrated bulls Colostra, Prince of Wales, and Leander.

This sale will afford to breeders an opportunity of adding to their stocks thorough bred animals of high character and pure blood, and their diffusion into proper hands is a primary object in this sale, together with the necessity of a separation of the herd to prevent over close breeding.

Catalogues will be ready in due time, and the cattle may be examined at the Exhibition ground two days previous to the sale.

Contents of this Number.

The American Institute, its history, 129
Fair ofdo. for 1842, 131
New-York State Agricul. Soc. and Show for 1842, 133
Sales of English Pigs, 134
Tour in England, Show of Yorkshire Ag. Society, 135
Kentucky Farming concluded, 138
Suggestions for regulating Premiums at Fairs, 140
Summer Food and Drinks, 142
Farming Tools, 143
Acknowledgements, 144
Southern Ag. Fruits and Products, by J.McCaughan, 145
Saxon Sheep, by H. D. Grove, 147
Bokhara and Sweet Clover, by J. H. Hepburn, 149
Weeds of Agriculurists, by Examiner, 150
To breed Males or Females, by J. H. J. 151
Blight in Pear tree, by H. 152
The Berkshire Boar, Windsor Castle, with cut and remarks, by J. Mahard and R.H. Hendrickson—Southern Fruits, by T. Affleck, 153
Yorkshire Swine—Cultivation of the Raspberry, 154
Uses of the Raspberry and Receipts, 155
Varieties of Wheat—Pulverizing the Soil, 156
Barley from Hudson's Bay—Reports for Premium Butter and Cheese—Receipts, 157
Farmer's Encyclopedia—DollarFarmer—Farm House of the 19th Century—Direcory for Fairs in 1842, 158
Reply to Geo. Reed—Silk Cocoons—Sheep Husbandry—Dr. M. W. Phillips—Saltpetre—Greasing wagons 159

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.-- *Washington.*

Vol. I. **New-York, September, 1842.** **No. 6.**

A. B. Allen, and R. L. Allen, Editors. Saxton & Miles, Publishers, 205 Broadway.

" THE AMERICAN AGRICULTURIST"

ill be published Monthly, each number to contain thirty two pages yal octavo.

Terms.--One Dollar per annum, payable strictly in advance.

Six Copies will be sent for $5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside.

Twenty five Copies will be sent for $20, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, post paid, No. 205 Broadway, New-York.

☞ **Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

History and Traditions of Short Horn Cattle.

The great show at Hull being over, we accepted the kind invitation of our excellent friend Mr. Bates, to pass a week with him at Kirkleavington; and, on our way thither, made occasional detours in Yorkshire and Durham, stopping to visit the Roman antiquities at York, its old churches, and the glorious minster; Studley Park, with its charming show grounds of lake and dell, and extensive monastic ruins, the solemn grandeur and exquisite beauty of which neither pen or pencil can describe; Ripon Cathedral and Newby Hall, and several other places; and subsequently by ourselves, the large manufacturing cities of Leeds and Sheffield, and numerous towns and scenes that it would but fatigue our readers to mention. We traversed Durham and Yorkshire with unspeakable interest, for these counties are emphatically the home of the Short Horns. Here they originated, here they have flourished from time almost immemorial, and here they received those improvements that have carried them forward to such a pitch of excellence as to ensure them a precedence throughout the most fertile regions of the world. Very large exportations have been going on from here to America for more than a quarter of a century. The British colonies in Australia and elsewhere for some time have been following our example, and a few of the European governments are just becoming alive to their marked superiority for milk and grazing in rich pastures, over every other breed of neat stock existing.

Ten years ago we read the Rev. Mr. Berry's pamphlet of the history of Short Horns with eager interest, but have ever regretted that it was not written out more fully and complete, for at this time the Messrs. Colling were living, and many others, who unhappily are now dead, that could have furnished particulars of the appearance, characteristics and breeding of the founders of the Herd Book, and their remote ancestors, which would have been of the greatest importance not only to the breeders of our day, but even to their posterity. How eagerly is every minute particular gathered up and detailed, again and again, of the appearance, the powers, the speed, the endurance, and general traits of England's early Arabians and their immediate blood descendants, and will less interest hereafter be attached to Short Horns? We think not, and as a few are yet living who have seen and known the first animals of the Herd Book, we hope that among them some one will yet be induced to give the world, fearlessly and honestly, every thing that can now be gathered up respecting their origin, gradual improvement, and, indeed, their whole minute history. Mr. Berry, alludes to "floating traditions," and although there was much, doubtless, somewhat apocryphal in them, still they contained grains of truth, which might have been sifted out; and even if this were impossible, we must confess ourselves so enthusiastic in the cause, that we should have copied them down verbatim, allowing the public to estimate them at their own value. We acknowledge that we have a profound respect for this same "tradition;" gleams of light can always be found in its records, and what else is the early profane history of man, and every thing connected with him?

The popular belief about Short Horns is, that they were all a large, coarse, though somewhat valuable race of animals, existing on the banks of the Tees, till Messrs. Robert and Charles Colling, of Durham, appeared upon the stage as breeders, and that we are indebted to these gentlemen for their chief excellence and improvement; nay, that such was their genius and such their plastic power over the animal creation, that they took up the most common and ordinary animals of the country, and with a sort of enchanter's wand, converted them, in the space of a few years, into the superb, improved Short Horns that now prevail in Great Britain and America. But *tradition* says, the best tribes have existed in great excellence for more than two centuries, making them in reality an ancient race of animals, carrying the same preeminent qualities from generation to generation, with continued improvements on the part of their indefatigable and scientific breeders, till at length they have reached a state of excellence which may be pronounced almost perfection.

As an evidence of the ancient excellence of this race, let us now turn to the pamphlet of Mr. Berry, who seems to have received and set down most of his particulars with great caution.

As early as 1745, living witnesses informed him that a breed of cattle existed on the banks of the Tees, in color resembling what is called the improved breed of the present day, except that the fashionable roan was not quite so prevalent; possessing a fine mellow touch, good hair, light offal, particularly wide carcases, and deep fore quarters they were also justly celebrated for extraordinary proof when slaughtered, resembling thus closely their descendants of the present day. One trifling difference alone is worth recording, the horns of the old Teeswater breed were rather longer, and turned gaily upwards. About this time Sir William St. Quintin, of Scampston, imported cows and bulls from Holland, which were soon crossed upon the Teeswater stock, and became distinguished, as "uniting in a wonderful degree, good grazing and dairy qualities."

In 1740, Mr. Milbank, of Barringham, stood pre-eminent as a Short Horn breeder; and it is on record, that a five year old ox of his weighed, dressed the four quarters, 2,100 lbs. beside 224 lbs. of rough tallow; and a cow of the same stock, a daughter of the old Studley bull, weighed upwards of 1,540 lbs. The Studley bull was described to Mr. Berry, by a person who had often seen him, as possessing "wonderful girth and depth of fore-quarters, very short legs, a neat frame, and light offal." Had he added mellow handling, which no doubt the animal possessed, nothing more essential could be said of the good Short Horns of the present day, and yet this bull existed long before the Messrs. Colling appeared as breeders, for he was the sire of Dalton Duke, sold at the "then high price of 50 guineas to Messrs. Maynerd and Wetherell, in whose possession he served cows at half a guinea each." From the old Studley bull are also descended William and Richard Barker's and Mr. Hill's bulls, a... animals of the highest reputation of their day, and the originals of the improved Short Horns. These circumstances forcibly prove that Mr. Milbank mnst have possessed a very valuable stock of cattle, even at that early period, namely, one century since.

From Sir William St. Quintin, Sir James Pennyman stocked his estates in the counties of Yorkshire, Durham, and Northumberland, and from these came the celebrated Snowden bull, bred by one of his tenants at Hurworth, which was the sire of Hubback.

As a proof of what the Short Horns did before, and about the time, the Messrs. Colling commenced their career of breeding, Mr. Berry records the following facts of their great weight and early maturity.

Sir Henry Grey, of Howick, bred two oxen, which weighed, at six years old, 1820 lbs. each.

Miss Allen, of Grange, bred a three year old heifer, fed on hay and grass alone, which weighed 1260 lbs. The same lady also bred two three year old steers, fed in a similar manner, weighing respectively 1288 and 1344 lbs.

Mr. Waistell's four year old steer weighed

1540 lbs Another of same age, bred by Mr. Simpson, fed on hay and turnips alone, weighed 1890 lbs.

A cow, from Mr. Hill's stock, weighed 1778 lbs. A Northumberland ox, bought by Mr. Waistell, yielded 364 lbs. of tallow.

Mr. Coates slaughtered a heifer, fed on turnips and hay, which, at two years and two months old, weighed 952 lbs., while a seven months heifer of his came up to 476 lbs., and a steer, exactly three years old, 1330 lbs., and another, two months older, 1470 lbs.

An ox, bred by Mr. Hill, six years old weighed 2124 lbs.

Two Howick oxen, at seven years old, respectively, 2137 lbs., and 2136 lbs. of beef, with 231 and 224 lbs. tallow.

Mr. Charge's ox, of same age, 2362 lbs., with 192 lbs. of tallow.

" Thus much," adds Berry, " for the Teeswater cattle, the originals of the improved Short Horns, ripe in points, possessing fine symmetry, and light offal, their descendants are not a breed of yesterday, liable and likely to *degenerate tomorrow ;* but they possess the important advantage of being descended from a long line of animals, in which existed, in an eminent degree, the good points which are now admired in themselves."

In passing over the classic ground of this famous breed of cattle with Mr. Bates, our interest and enthusiasm in their early history, seemed to awaken something of the same feeling in their veteran breeder, our excellent friend and fellow-traveller. His own superb tribe, descended, as he claims, from the most ancient of the ancients, had just carried off pretty much all the prizes of value at the Royal Agricultural show at Liverpool, and again at that of Yorkshire, at Hull, where, at a public dinner, he was toasted by an honorable member of parliament, as the "unconquerable Bates." With all these blushing honors thick upon him, he was, of course, in excellent spirits, and, as we stopped at towns and rambled over beautiful estates, many were the curious details that he gave us respecting them , but a small part of which only, we regret to say, we have now the space to relate. His father was a breeder of some eminence before him, and he himself was the contemporary of the Messrs. Colling, occasionally domiciled at their hospitable mansion, watching and commenting on their breeding, and now and then purchasing an animal for himself as he could obtain them, and they suited his purpose.

The family of the Aislabies, the then residents of Studley Park, had very fine cattle in the seventeenth century. Sir William St. Quintin drew some of his best blood from this source, and of course Hubback had it in his veins through the Snowden bull. The ancestors of the present Sir Edward Blackett, of Matfer, in Northumberland, then owners of Newby Hall, (now the residence of Earl de Gray, Lord Lieutenant of Ireland,) paid great attention to short horned cattle at the same time with the Aislabies. Portraits of these animals were occasionally taken and hung up to adorn the entrance of Norfolk Hall ; but, when the noble residence passed out of their hands, those pictures were sold. We should hope that they existed yet in some "old curiosity shop," and, if so, and can be found, we shall then have a definite idea of what one family of ancient Short Horns were.

But Mr. Bates' proudest claim of antiquity rests upon the Duchess tribe, and these, he contends were good animals, bred by the Smithsons of Stanwix, (now Duke of Northumberland), two centuries ago.*

The last Cow of the superior race of Short Horns, being on its way to London, to be sold in 1784, Mr. C. Colling heard of it and purchased her. This was the same year he bought Hubback ; to him she was bred. Her produce was put to Favorite, (252), and that to the Dairy bull (186),† and thus the blood was preserved, and by Mr. Bates' purchases in 1804 and 1810 of Mr. Colling, has ever since rested in his possession. We saw the portrait of this Stanwix Cow's great granddaughter, the produce of the Dairy bull and dam of Ketton I. (709,)* and as the family now down to the 52d Duchess, bred by Mr. Bates, strongly resembles it in general characteristics, we give a description.—This was taken we believe in 1804 when the animal was rather low in flesh, and giving milk; at which time, being deep milking, they show thin upon the rump, but when dried off and fatted, Mr. B. assured us, they made as good a point there as elsewhere. Their colors vary, from deep rich red to a roan, and both horns generally turn slightly up. Color of the portrait more red than white, the former predominating over the neck and shoulder, the latter on the flank. Horns fine, short, and of a clear waxy color, one of them drooping a little, the other slightly turned up—head long and fine, the muzzle extremely so—eyes bright and glowing, and standing well out. Brisket wide, deep and better forward than any other animal known, we do not even except the living Dutchess 34, though a superb model in this respect. Shoulder, barrel and loin good, and rather thin on the rump, in consequence, as before remarked, of being in a milking state. The tail fine, but not quite as perfectly set on as we could have wished, but this is not a family fault in the descendants. Her limbs midling as to length, and clean and sinewy, and the whole animal, altogether, bearing a fine finished fashionable air.

---

* About the time that George III. ascended the throne, the title of Duke of Northumberland became extinct by the death of the last male heir of the Percy family. Sir Hugh Smithson had married a daughter of the Duke of Somerset, descended from the Percy family by her mother, and having children by her, George III. raised him to the title of Duke of Northumberland. So fond was he of his Short Horns, that his peers quizingly dubbed him " the Yorkshire grazier." He was in the habit of weighing his cattle, and the food they eat, so as to ascertain the improvement they made for the food consumed. The Earl Percy, who fought at Bunker's Hill, was his son, and it was during his absence to America that the estate at Stanwix was grossly missmanaged, and its fine race of Short Horns all fatted for the butcher, or sold off. The Mr. Smithson, who left the large sum of half a million to the United States, as a fund for the promotion of national science, was a natural son of the late Duke of Northumberland. It has been suggested that the Smithsonian bequest be appropriated to thesupport of a model farm, and high school of agriculture ; and, if this praiseworthy object could be carried into effect, it would be a curious coincidence, that a descendant of the greatest improver of Short Horns in Europe, shall bet he founder ofthe greatest improvement of agriculture in America. But we doubt whether anything so good will ever become of the legacy. We fear our politicians will yet spend twice the amount of the bequest in wrangling over its disposition, and then, perhaps, place it in a very different manner than was intended by the testator. Here is another regret, that the benevolent donor had not come over to America while living, and seen himself to the disposition of what he had to give. There would have been then an immediate application of it to some useful and benevolent purpose.

† See Coates' Herb Book, vol. 1st.

The beef of this tribe is pronounced superior, and their handling very mellow and elastic. In this respect as well as all others they were favorites with Mr. Colling, and when his stock was in its highest perfection, he was in the habit of showing Dutchess I. as a model of superior handling, and has repeatedly said, he never bred so good an animal out of the Stanwix Cow he purchased of the agent of the Duke of Northumberland, as she herself was, though put to his best bulls, Hubback, Favorite, and Daisy.

It was conceded by a company of old breeders in 1812, in discussing the question of the improvement of Short Horns, that no stock of Mr. Colling's breeding ever equalled "Lady Maynard," the dam of Phœnix, and grandam of Favorite. One cannot deny that the Messrs. Colling deserve great credit as breeders, and were no doubt improvers to a considerable extent; but if the above statements be true, they are far, very far indeed, from being the *creators* and *originators* of the best tribes of Short Horns. They strike us as having been sharp shrewd men, and were fortunate in securing the best animals of their day, and these, so long as they continued breeders, they kept exclusively to themselves. We saw a letter of Mr. C. Colling, when in England, written in a handsome round hand, declining to give the pedigree of an animal asked of him, and stating that it was a general rule with him, from which, if our memory serves us right, he added, he had never departed, and his movements (as indeed are most of those of the breeders in England even at the present day,) were shrouded in as much mystery as it was possible to assume.* If they see an advantage in their stock, they at once determine to keep it as exclusively as they can, and make the most possible out of it. Perhaps as they cannot get a patent right for animals, this is all fair enough as the world goes, and for one we do not complain, since they left the *results* for the world.

Great antiquity is claimed for some of the stock in Northumberland, and as early as 1770, a Mr. Dickson, and probably some others had cattle that were famous milkers, and much resembled in other particulars the Short Horns of the present day, being quick feeders and good handlers. We might enlarge upon this subject, but perhaps have already said too much, and therefore forbear. Enough is on record to prove what we at first set out to do, namely, that the Short Horns are of an ancient and superior race; and it is undeniable throughout Great Britain, that when the good milking and quick feeding qualities of any breed of cattle are sought to be improved, the Short Horns are universally resorted to, and when properly selected, always with marked success. We saw these crosses in infinite number on the cattle of Ireland, Scotland, England and Jersey; and the colors and form of the Short Horns immediately stamped themselves upon the produce and predominated, which is proof indisputable, if other were wanting, of their great antiquity and long high breeding.

The dam of Hubback was supposed to be a well bred Short Horn, with at least some portion, if not all of the imported Holland blood† her veins. Her size was barely medium for a Short Horn, with a carcase near the ground, and very fine in all her points. She was a quick feeder, and would keep in good condition though running on the poor, short pasture of the common highway, and giving milk at the time. According to Mr. Berry's account, when put upon good pasture near Darlington, she soon become too fat to breed, and was consequently sent to the butcher. She was originally owned by Mr. Hunter near Hunworth, and there bred to Mr. Snowden's bull, of Sir James Pennyman's stock, and that produce was Hubback. When a calf, he and his mother were both sold in the Darlington market. The purchaser retained the cow, but re-sold the calf to a blacksmith, who gave it to his daughter after her marriage, and it was brought up in the lanes at Hornby, within five miles of Kirkleavington. In 1783 it became the property of Mr. R. Colling, and his neighbor Mr. Waistell, but it was not till a year after this, that Hubback attracted Mr. C. Colling's particular attention. He had then just returned from spending a week with the celebrated Mr. Bakewell, at Dishley, who at that period, was in the zenith of his glory as a breeder, and doubtless gave Mr. Colling many a good lesson on Cattle, for upon getting back to Durham, he instantly saw how superior Hubback was to the much vaunted Long Horns of Leicestershire, and was at once aroused to his great merits, and immediately very adroitly bought him for £8. 8. of his brother and Mr. Waistell, and would never after permit him to breed to any but his own herd. Hubback was a remarkable quick feeder, with clear waxy horns, mild, bright eyes, and a very pleasing countenance. His handling was superior to any bull of his day; his coat was of soft downy hair, and he had the habit of retaining it long in the spring before shedding. He had the same propensity to take on flesh as his dam, and with Mr. C. Colling's good keep, soon became useless as a breeder.

---

* See Coates' Herd Book, vol. 1st.

* This was also eminently the case with the celebrated Bakewell.

† We have heard it asserted, that this stock was originally sent from England to Holland about two centuries since, as a present, by Charles I. to William, Prince of Orange, then Stadtholder, at the time of his marriage with the daughter of Charles, the Princess Henrietta Maria. From this produce a century after, Sir William

Bolingbroke (86), son of the celebrated bull Favorite (252), took on flesh rapidly, and in other respects was much like Hubback.

Favorite, his son, was a large massy animal, partaking more of the character of his dam Phœnix, than that of his sire. He possessed remarkable good loins, and long level hind quarters; his shoulder points stood wide, and were somewhat coarse, and too forward in the neck; his horns also, in comparison with Hubback's, were long and strong. These qualities were derived from Mr. Hill's stock of Blackwell, to which, though several crosses off, he seemed to breed directly back in all his general characteristics. He was a powerful animal, and of great constitution. As a proof of this last quality, Mr. Colling used to show with great pride a fine large heifer from him, of direct in and in breeding, of sire to daughter, grand-daughter, and so on to her, of the sixth generation. His bull calves were generally like himself, a trifle coarse, but of good constitution.

Comet was the most celebrated of his get, and sold for 1000 guineas. It was the stock of these two last bulls that brought the Short Horns into so great repute.

Phœnix, the dam of Favorite, was a large open boned cow, with more horn, and altogether coarser than her dam the beautiful Lady Maynard. Both Phœnix and Old Johanna had the fat lumps on the points of their buttocks, that formerly for a time carried off all the prizes at the Yorkshire Cattle Shows. But these critical remarks we fear are exhausting the patience of our readers.

To say that we admired Mr. Bates' stock, is only reiterating the opinion of many of the best judges in England. It particularly excels in handling* and feeding qualities, and he informed us that in milking they were quite equal. He has hitherto been more successful than any other breeder, in obtaining prizes at the Royal Agricultural Shows, and whether he continues so hereafter, remains to be seen. It is both troublesome and expensive showing stock, and perhaps satisfied with the honors already obtained, he may now retire from further competition.

THE FARM OF MR. BATES—CLAY LANDS.—His farm is about one thousand acres, of a stiff clay to the very top, reminding us strongly, in its whole composition, of the adhesive soil of a considerable portion of western New-York, and especially on the banks of the Niagara river.

In the moist climate of England it is very productive, especially in the grasses. But it takes a century for a meadow on such land to perfect itself, and we were absolutely as-

---

St. Quintin and others made their importations. Mr. Bates had some of the same in his possession, which he called the Wild Eyes breed of Short Horns. They were originally pure white, and it is this tribe which is supposed to have marked the Short Horn families generally, and not the Wild Cattle of Chillingworth Park, as asserted by Mr. Youatt in his work on British Cattle; for these last have a white brittle horn, a dull, sluggish, ferocious eye, and other characteristics totally different from any well-bred Short Horn.

* See the term *handling* defined in this No. of our paper.

tonished to see the difference in grass produce from those that had been recently laid down, and such as had stood even forty years, compared with the oldest of one hundred years. The grass was so thick on this last, that it reminded us more of the fine close fur upon a beaver skin than anything in the way of herbage, to which we can compare it, and perfectly satisfied us of the conclusion, to which we had arrived from experiments at home, *that a stiff clay soil should never be disturbed by a plow*, but left permanently in grass forever. Mr. Bates has 612 acres of his farm under plow cultivation, which is divided into 12 fields of 51 acres each; these undergo a 12 years' rotation. Unless the season is particularly favorable and wet even for England, his soil is so heavy he cannot even succeed in raising turnips, and of course this crop often fails. Nevertheless, as this root is so important an aid in the support of stock, he annually makes a trial to grow it. We recommend his abandoning turnips and sowing sugar beet in their place, as infinitely better cattle feed, a more productive, and a perfectly certain crop on clay lands.* It is not material to the American farmer that we detail this system minutely, as it could not be exactly followed in our climate. The 12 years' course is subdivided in two sixes, and consists in a fallow of turnips, followed by wheat, then sowed to clover and grass for a sheep pasture, usually followed by a turnip fallow again, with wheat or oats, and lastly beans. He, in common with all English farmers, seeds much more heavily than Americans generally; we wish we could arouse our countrymen to the importance of following so commendable an example. For instance, Mr. Bates will sow on a single acre 5 lbs. of cow grass, (a kind of perennial clover), 5 lbs. white clover, 2 lbs. hop clover, ¼ bu. Italian rye grass, and ¼ do. Cocksfoot, (orchard grass), calculating at the same time, that the natural grasses, such as the poa trivialis and others, will come in plentifully of themselves. Of course the land is all underdrained, either with tiles or the drain plow, this on all retentive soils is the *very first* and *most important* step to be taken in England, and on Mr. Bates' farm, was very soon followed, not only by a double product of grass, but by that of a greatly improved quality; and without underdraining, or open ditching, it would be almost impossible to obtain a good crop of grain, beans, or even roots.

We passed a whole week at the hospitable mansion of our kind and benevolent host, and a happy and we trust a profitable time we made of it. We should have entered into more details respecting the stock which we saw there, had not a slight allusion to it, in a hurried letter of ours published in last Nov. Cultivator, been totally misunderstood, and our motives for writing it most grossly and wantonly assailed. To any of these we have never thought it worth while to reply. Those who knew us understood our object in making the allusion, and to those who did not we conceived an explanation would be entirely useless. We can only hope hereafter that a better understanding will exist upon this subject, as well as some others to which very useless exceptions have been taken.

Improvement of Sandy Soils.

In a short jaunt we have recently taken through that paradise of New England, the Connecticut valley, we have witnessed a success in the reclaiming of worn out sandy lands, which we hardly dared to expect with the ease, economy and facility with which it has been accomplished. The Hon. W. Clark of Northampton, has been the great pioneer in this course, and from the successful results he has achieved we may fairly class him among the great agricultural reformers of the present day. He has already given to the public the theory of his operations, which we hope to find room to lay before our readers at some future time. Our object now is simply to give his *practise*, and after our farmers have begun the good work of reclaiming their almost barren wastes, it will be a pleasure for them to look into the modus operandi, and see the reason of their success. There are three essential features in this practise, and the simultaneous adoption of each is essential to effect the desired object. The first is the frequent and thorough use of the *roller;* the second a constant covering of crops on the ground; the third is the introduction of clover and grass as a fertilizer. To illustrate this, we give the history of a single field of some 40 acres of worn out sandy soil, in the vicinity of N. This field was purchased by Mr. C. some eight or ten years since for nine dollars per acre, while the fertile bottom lands on the other side of the town, would sell readily for $150 to $200. His object was first to get a crop of corn if possible, and the land being too poor for this, he carried on to it a moderate quantity of peat or swamp muck, which was found in the low places on the same field. We may observe in passing, this peat and muck exists to an almost unlimited extent throughout New England, and we consider it of vastly more intrinsic value to the community than all the gold mines that have dazzled the eyes of our Southern neighbors for the last fifteen years. With this dressing say of fifteen to thirty loads to the acre, the whole cost of which consists in simply digging and throwing into heaps, to be drained, and acted on by the atmosphere, after which it is carried either by carts or sleds in winter on to the adjacent ground; the land is then ploughed, and whatever scurf, sand grass, rushes, mosses, pusseys and briars there may be on the land are turned under, and such is the *digestibility* of the soil all these raw materials are at once converted into humus or geine as food for the required plants. This sandy soil has the stomach of an ostrich, and if it cannot, as that voracious biped has the credit of doing, digest old shoes, iron spikes, and junk bottles, it can dissolve and convert into vegetable chyle, whatever organised matter is given to it. The effect of this comparatively slight dressing yielded a first crop of some thirty bushels of corn to the acre, enough to pay for the first cost of the land and the whole expense of producing it. But while the corn was growing, say from the 20th July to the 10th August, rye with red and white clover seed was sown, and the corn being so planted as to admit of harrowing two ways, or even four if necessary, it was well got in with the harrow, and the ground being amply protected by the corn during the sultry weather of this season, the new seed took a vigorous start, and as soon as the corn was somewhat matured, it was cut and carried off the ground, and the new growth then had the entire possession. The roller was then thorougly applied, as also in the following spring. The early sowing gives strength to the roots of both rye and clover, and renders hazard of winter killing either, especially the clover, much less. When from any cause he is prevented from sowing the clover early, it is omitted till early in the following spring; a postponement that should be avoided when possible, as it thus loses a year's time, requiring another season to mature. The rye is cut the following summer, when the clover is suffered to remain, shedding its seed upon the ground for a successive crop. The following season; if in proper condition, it is again put into corn or rye according to its fertility, and the course is again renewed. The land however usually requires an additional season in clover, and sometimes more to give, the requisite fertility. Mr. C. showed us a field, which from the originally poor condition described, without the addition of any manure or peat or muck, has produced him five crops in seven years, the last, which had but just taken off, yielding seventeen bushels to the acre. This it will be readily admitted is a large crop for poor land, and much beyond the average yield in New England. The growth of the clover on this field, of this spring's sowing, was promising in the highest degree, and as evenly set as in the best land, giving every promise of a large crop the next season, which of course is designed to be added to the soil for its future improvement. When the land is first put into use, (for Mr. C. has several other similar fields which have been variously treated, though always on the same principles,) and it is too poor to produce a paying crop of corn, and he has not time to add the muck, he turns under the surface vegetation, and puts on a crop of rye *always* accompanying this with the clover and after one year's crop from this last, he never fails in a fair yield of corn. On a field thus treated, without any dressing of muck he got 27 bushels of corn per acre for the first crop, and after an interval of another season, obtained thirty-three bushels on the same land, showing a decided increase in the productiveness of the soil. A slight dressing of plaster is generally, though not always used, and never exceeds half a bushel to the acre. Mr. C. admits that more plaster might be useful; we think one to two bushels per acre would be applied with decided advantage, but it is purchased at a high price, about $10 per ton, and as economy and a self sustaining policy, has been a prominent principle in this system, this is all that has thus far been afforded. The muck would in all cases be a valuable, remunerating addition, but this he has not always the time to give, and at the prices he has paid for his land, he can afford to leave it once in two or three years in clover, by which it is renovated, and for the present perhaps this may be the most judicious plan. As lands become dearer however, which they are rapidly doing under this management, they being now worth $20 to $30 per acre, of no better quality than such as he bought a few years since at $8 to $12, the policy of manuring will become more expedient, though the rapidly improving nature of this system will give greater efficacy to the clover crop as a fertilizer.

---

* As to the good qualities of Sugar Beet in feeding, we refer to Earl Spencer's experiment of it, copied into May No. of this paper, page 53. Its superior value over Ruta-Baga and Mangel-Wurzel, we have ourselves often tested, and we have been unsuccessful in getting a crop of turnips, on heavy soils oftener than once in four years, though cultivated with great care, and that was during a very cold rainy season; whereas our Sugar Beet has uniformly been good, never less than 400 bushels per acre, and sometimes over eleven hundred; and we have a small crop now growing (Aug. 1842), that we think will turn out at least 1000 bushels to the acre. Indeed we shall be disappointed if it does not exceed this amount.

It is surprising to see the elevated noles and barren planes, that so lately exhibited nothing but a crawling sand, by the operations of the clover roots, in this otherwise impracticable material, gradually changing its inadhesive character to a firmly connected mass, showing a furrow slice that would gratify the most practised eye. Mr. Clark acknowledges his surprise at the facility with which the clover takes, and attributes it mainly to the use of the roller. We are inclined to concede much to that instrument, but think for his white and other clover he is greatly indebted to the Plaster. Of this we have more to say hereafter.

We observed the woodchucks, who are arrant epicures and gourmands in their selection of esculents, and especially of sweet and abundant clover fields, are thoroughly colonized over all the fields of Mr. C. They follow him, as our politicians do the successful candidate of Executive dispensations for John Randolph's seven principles, the five loaves and two fishes. They snuff his green patches of trefoils, and instanter abandon the poverty stricken fields of his unthrifty neighbors. His crop of wood chucks, though not as important as the *shoe crop* at Lynn may soon be well worth the harvesting.

Mr. C. has not pursued this cultivation sufficiently long to have matured a *system* of rotation, which, however, he virtually practises with some variations, from his own judgment. A little more experience will enable him to determine, whether a crop can be taken more advantageously every second or every third year, but we are satisfied, with a moderate dressing for the corn, the rotation might be of three years duration, affording alternately corn, rye, and clover, the last to be added entire *when dry*, to the soil, for its improvement. Green crops are never used as improvers, they always being allowed to mature before turning under. Plaster should always be added, unless ashes or lime can be more economically applied; but the former is limited in supply, and the latter is to be had only at a price which will effectually prevent its use in this region.

Here, then, we have a *system* for reclaiming barren wastes within every one's reach; costing nothing, and yielding a great deal; and if this were rigidly carried into practice, how soon should we see the naked sand banks, that exist, to a greater or less extent, everywhere between the Alleghanies and the Atlantic, converted into verdant, luxuriant fields. Yet for the want of the application and steady perseverance in this plain, straight forward, simple course, how many will continue to live on in ignorant poverty, when they might, with less toil, and the use of a moderate share of intelligence, have a competency. A single bar left down in this practice, lets in the whole herd of Pharaoh's lean kine. Without the roller and plaster you get no clover; if you cut off the clover when grown, you get no subsequent crop; or if you crop too closely or rapidly, the clover-bearing properties of the soil are exhausted, and new manures, or years of idle, wasteful fallow are necessary to resuscitate it; whereas, by a careful observance of the above plan, the ground is constantly and profitably at work, bearing its burthens on equitable shares, giving one half or two thirds to you, and reserving the remainder to itself, to enable it to continue the supply. Though Mr. C. does not connect any grazing or stock-feeding with these operations, it is easy to see how it can most advantageously and profitably be associated with them. Cattle and sheep can be put on to the rye fields both in fall and spring, when sufficiently thick and stout to justify it, and when well sodded over with clover, what more mutually advantageous to cattle and land, than such a copartnership.

We must add a word for the benefit of such of our readers as have no sandy or sterile soils, nothing but virgin fertility, falsely estimated to be exhaustless. We beg all such to consider that the principles for reclaiming, are the principles for *preserving* also; that no land is so rich but that it can be exhausted, unless fed by inundations, and that there is more profit in sustaining their lands in the highest condition of fertility, than by a wasteful system of cropping, first to reduce them, to be resuscitated again by slow and painful efforts, or abandoned to posterity to be gradually reclaimed by the sure, though dilatory, operations of nature, to that state of fertility in which they might easily have been preserved.

There are some particular advantages that attach to the tillage of light sandy soils. They require the least possible effort to plow and harrow, and these operations can be performed at all seasons when not frozen; no season is too wet, too late, or too early for them. They require no underdraining, and the food for vegetables, in whatever shape it is added, however crude and indigestible, is immediately converted into pabulum for the required crop. The amount of corn and rye afforded per acre would not satisfy a western farmer, and very properly too, but he must recollect that his prices seldom exceed one-half those obtained at the east, rye and corn being worth usually 60 to 90 cents per bushel, and the straw and stalks go far towards meeting the costs of cultivation. The luxuries also, of good buildings, which are always to be had for less than cost, good roads, schools, and churches, and all the accompaniments of a matured and well ordered society are at hand, and are cogent reasons for reconciling the reflecting mind to the absence of that superabundant fertility which so universally characterizes the west.

Reclaiming a peat swamp.—At no inconsiderable distance from the theatre of operations above described, we went to look at others scarcely less interesting. On the premises of David Lee Child, Esq., we found a peat swamp of some 30 acres, of an oval shape, having a ditch of sufficient depth through its longest diameter to drain off the surplus water this kind of soil is so avaricious of retaining. An additional ditch around the circumference to arrest and conduct off the surface water that rushes down from the surrounding hills, or silently, beneath its surface, steals along in its deleterious course through the soil below, will complete the architecture of this field. We have then a sufficiently dry surface of partially decayed vegetable matter reaching to an unknown depth, say from 4 to 20 feet. Its extent may be judged of from the fact, that after draining the swamp some 15 years since, the surface has fallen several feet, requiring the outlet to be deepened to carry off the water from the subsiding soil. Here, then, we have a vast fund of geine, or food for plants, for all estimated purposes, perfectly inexhaustible. The tyro in agriculture would say, we have here a boundless fertility, we have only to sow, and an abundant crop will reward the effort. Try it. Plant your corn, and sow your oats, and scatter your grass seed, and let us see the result. There it is; the corn about a foot high this 8th of August, looking for all the world as if it had just got up and ashamed of itself and kinsmen, was trying to get back again as quick as possible; the oats thin and meagre, scarcely indicating which way they are going, whether up or down; while the cultivated grasses, if they exist at all, are so deep in the mire, that the rank wild weeds, indigenous to the soil, lord it over them so proudly that they scarcely deign to notice their poverty-stricken neighbors. But let us look a little further. Here is corn 10 feet high, and still spreading with a rankness and luxuriance that would excite the envy of the owner of the richest alluvial bottom lands. Here are oats, so tall and heavy, that but for their denseness, they would be a mass of horizontal straw; and the clover is only exceeded in height by the oats, while, in weight, it is their full match. What makes this great contrast, a difference as wide as between a famine and a surfeit, a drought and an inundation? This unsurpassed fertility has been produced, simply by carting or sledding on to the land in winter, 150 loads of gravel to the acre, that exists within a few rods on every side of it, at a cost of 6 to 10 cents per load. This is all that has caused the change, and the same operation that has effected a drain from the swamp, affords the required material, while the ditches which have been made through it, of some 4 feet in depth, and tapering from 4 feet at top to two at the bottom, afford the richest top-dressing for the adjacent hill-side of hungry gravel. We saw here melons and garden vegetables, potatoes, and other roots, growing with a luxuriance that a primitive settler of the prairies might well envy.

We are aware that that eminent agriculturist, Mr. Phinney, has found the top dressing of gravel, sand, or clay, (for they all produce a similar effect, their chemical character not varying materially, though their mechanical condition is widely different,) has not produced a sufficient effect to continue these large crops, without the addition of a top dressing of some twenty loads of compost manure to the acre, when the coarse natural grasses have pushed their way among the cultivated ones above. A less quantity of stable manure carried on, and intimately mixed with the gravel and soil, would answer the same purpose, and lime and ashes might be added with great effect. When once thoroughly laid down, these lands will remain for years, affording immense crops of hay, and whenever turned over for tillage crops, will afford the largest yield. Mr. Phinney states that 75 bushels of corn, 500 bushels of potatoes, and 4 to 5 tons of hay per acre, are the crops from such land. And so valuable does he consider them, that he has refused to sell off the peat, which constitutes their foundation, for 500 dollars per acre.

WHEAT.—On the adjoining hill we found a good crop of spring wheat growing, without disease or injury from any cause whatever, which will yield at least 20 bushels per acre, worth usually, at that place, $1 50 per bushel. We noticed but one part of the crop that was lean, which was caused by a spring which had not been effectually carried off by an under drain constructed for that purpose. This, and several other equally promising specimens of the same grain, we saw growing in the town, convinced us that care and attention alone are requisite to furnish their own tables with flour; these, the policy of our country, by shutting up their manufactories, is fast compelling them to adopt, thus forcing them into an unwilling rivalship with the great grain-producing states of the west.

LARGE CROP OF OATS.—Judge Lyman, of N., showed us a field in the meadows adjoining the river, from less than three acres of which, he has harvested the present season, 240 shocks, which it was estimated would yield about one bushel each. This yield is great, even for these rich alluvial lands; but we should prefer seeing the measure applied, before allowing *quite* a bushel to the shock, affording, by the estimate, over 80 bushels to the acre. We should be gratified to learn from him the exact weight of threshed, clean grain, as these results are useful in stimulating and directing the efforts of less careful and scientific agriculturists.

His mode of preparing the land for this crop, was simply to carry on a liberal supply of compost and stable manure last fall, which was thoroughly incorporated with the soil by the plow and harrow.

IMPROVEMENT IN FARMS.—We were delighted to witness everywhere an increased attention to this first and most necessary branch of human labor. The improvement in agriculture, at the present moment, in the United States, is making incomparably more progress than at any previous period. There is an intelligence, and vigor, and steadfastness, in the pursuit of the best modes of farming, which has not before been witnessed. Inroads are making in the quagmires and swamps, that have been allowed to stagnate undisturbed for ages, sending their fetid exhalations abroad to poison and corrupt the atmosphere, the superabundant water is drained off, and the whole becomes a luxuriant, profitable, and healthful appendage to the farm. The alders, and black jacks, and swamp willows; the brakes, the ferns, and the lichens are converted into vegetable mould, to give additional fertility to the already accumulated stores of vegetable food. Better selections of seeds are made, adapted to the particular soil where grown, better tillage is adopted, more roots are produced for stock, and a large increase in the average crops is everywhere manifest. We think, from all the testimony we could gather, and the observations we could make, that an average increase of twenty per cent., in crops from the same land, is now produced over the yield of ten years since. If we add to this the introduction of superior and more profitable breeds of domestic animals, we have an amount of improvement that may well encourage the lover of his country to look forward to the future for increased abundance and prosperity for the population which is to succeed him.

SAXON SHEEP.—Theodore Strong, Esq., of N., has a beautiful flock of 700 sheep, one half of which are the descendants of the choicest specimens of the first imported Saxons, and the remainder are high crosses of them with the finest Merinos; but owing to the miserable condition of our woollen manufactories, the fleeces are unsaleable at any remunerating prices. The late Mr. Watkins, of Middletown, Conn., a gentleman of great enterprise and intelligence, and large experience in manufacturing, both in England and America, formerly bought his wool at $1 50 per lb., and assured Mr. S., when his wool would not bring $1 00, the factories in this country would be obliged to close their doors. The article, at the present moment, would hardly command one-half this price, and as predicted, what few mills are still left in operation are probably running at a decided loss.

MOUNTAIN PASTURES.—During our stay in Hartford, for two or three days, we accompanied D. C. Collins, Esq., to some of his hill lands. We do not recollect ever before to have seen the immense difference between good and poor management in pastures that we here witnessed. One of these, consisting of 34 acres, lying within two miles of the Summit Tower on Talcott Mountain, and elevated at least 500 feet above the river, was covered in almost every direction with tall rich grass, red-top and blue or June grass predominating, with a considerable undergrowth of white clover. The fields adjoining it, on every side, though pasturing less than half the number of cattle and sheep, were gnawed down to the very gravel, and from appearances, would not afford one-fourth the quantity of grass. The difference Mr. C. explained to be, that his own had been undisturbed since the original forest was cut off, while the others were occasionally turned over and exhausted by a meagre crop of rye, whenever they would yield enough to pay the labor, and were then turned out, like a superannuated horse, without care or provender, to recruit as best they might. No seed was ever sown upon them, no manure ever added to them, and the consequence is, that instead of always affording a plentiful growth of pasture, they yield barely sufficient to pay taxes and repairs of fences.

Another field belonging to Mr. C., of 14 acres, was still more remarkable. It had pastured during the summer 10 grown cattle and 36 sheep, yet the white clover lay on the whole surface, one prostrate, tangled mass of herbage, in which the foot was buried at every step. On asking a solution of this, we were told that, like the former, this had never been cropped since the clearing off the wood, and in addition, it had, last spring, a top dressing of one bushel of plaster per acre, and to this was the exuberant growth of white clover entirely owing. A small corner of the field, which had been omitted, had good grass upon it, but it was the red-top and blue grass, with a small growth of white clover underneath. The plaster caused the clover to change places with the grasses, and gave that the undisputed preeminence. The quantity of unconsumed herbage on the ground, at a moderate estimate, we should judge would not fall short of three-quarters of a ton to the acre when cured. We may cease to wonder why some people grow poor, while others grow rich, in cultivating adjoining fields under the same advantages.

Short Horn Cattle.—Mr. C. has a small herd of very choice Short Horns. These have large size, for their ages, being mostly young, possess fine hair, fine form, admirable milking properties, but are especially distinguished as handlers. This is a point Mr. C. has wisely considered of the first consequence, and it will tell hereafter in the results on his stock, like inbred truth on the human character. In this kind of stock, if handling and milking go together, the breeder may let other things look after themselves. If these go right, nothing else can well go wrong. We are prepared to see a distinguished race from these choice specimens.

Rambouillet Sheep.—The flock of sheep, consisting of 37 ewes and 13 rams, including lambs, originally selected by Mr. C. personally, from the celebrated Rambouillet flock in France, excited our unqualified admiration. The imported ram, and several of the ewes, could only be procured after they had been used in the national flock as far as it could be done with advantage. They possess unusual size for Merinos, with excellent forms and good constitutions. But their chief excellence consists in their immense fleece of fine wool. By fineness we do not mean to be understood that they have that silky texture that characterizes the Saxon alone; but while the fibre is equal to the best of our original Merinos, the quantity surpasses any we now recollect of the same quality. As a proof of this, it is only necessary to state that the ram sheared this spring, of tolerably clean wool, twelve and three-quarter lbs., and a yearling ewe, weight ten lbs. The average we omitted to obtain, but if we are not mistaken, it was between six and eight lbs. The growth of wool on them is enormous—it is wool all over, and nothing but wool. They seem fully to come up to their destiny, being preeminently wool producers, as there is scarcely an inch square on their whole surface that is not covered with *fine wool.* And it not only grows on the whole body, head, and legs, but the massy folds on the neck and thighs, and sometimes around the body, not only on the males but frequently on the females, with the large dewlap peculiarly characterizing this superb race, yield a surface to hang the wool on not afforded by any other race than the best Merinos. These have been imported at a large expense by Mr. C., for the express purpose of restoring the Merino flocks of this country to their original high character, and we think he has just the material in his hands to effect so desirable an object.

Handling Stock.

There are a great many persons, who do not understand even the signification of the term *handling*, as applied to cattle, sheep and swine. It is a subject pretty difficult for words alone to explain, and to thoroughly learn it, one must go into the cattle yard and sheep pens, with a good instructor, and do so from the living subjects themselves. A knowledge of *handling* is of the *first importance* to the breeder and grazier, and if ignorant of it, they can never produce animals of quick feeding properties, unless guided by others, or by mere chance.

As well then, as the term handling can be defined on paper, it is this. When we press the fingers upon the fleshy parts of an animal, and the hair, hide, and especially the flesh beneath have a fine, soft, firm, elastic spring, it is called *good handling*,—on the contrary, if they are coarse, thick, hard and rigid to the feeling, with little or no spring under the pressure of the fingers, that is called *bad handling*. Of course there are as many degrees in handling, from very bad to very good, as there are grades of animals. The better an animal handles, the kinder or quicker it feeds; that is, the sooner it will mature—become fully grown for the purpose of breeding, or to fat for the butcher, and will do so at a much less consumption of food, than a bad handler. By cultivating therefore, a race of cattle that handles well, there is a saving in two ways; first, we gain time; second, we gain food; as a good handling steer, for instance, will be fully grown and fat for the butcher, the fall after he is four years old; whereas, it will take the bad handler, two to three years longer to mature and become fat, and at this time he will weigh no more than the four years old steer; and the quality of his meat will not be as good. The breeder of this last, then, has lost at least two years interest on the amount of money for which the first sold, two years more of risk by accident and disease; two years more time and attention to his animal, and two years additional consumption of food; which together, makes a difference, probably, at least, of fifty per cent. in favor of good handling beasts.

So important is handling considered in England, that when the grazier comes to purchase stock of the breeder to feed through the season, to fat for the butcher, he would rather buy his animals *blindfolded*, and *handle* them, than by an inspection of the *eye alone*, without handling. This observation applies more particularly to the *improved* breeds of cattle; the *unimproved*, such as the Scotch, Welsh, and from several counties of England, are judged by the eye alone; still, when not too wild to get his hand upon them, the grazier, in purchasing, will always feel their fleshy parts with his fingers, the better to assist his judgment in a profitable outlay of his capital. Lectures ought to be publicly delivered on this subject with the living animals before the auditors at all our cattle-shows, for our breeders and graziers are deplorably ignorant upon the point of good or bad handling.

It is said sheep bells *will protect* lambs from foxes.

Cultivation of the Mulberry and Production of Silk.

As we deem the raising of silk one of the prominent objects of attention to our farmers at no distant day, and one every way commending itself to their careful consideration now, we shall proceed to give a brief manual on the subject from our own observations and that of others. The first step to be taken, is the selection and raising a sufficient number of plants, which shall be the best fitted for the production of silk. Trees it is not necessary to have. A long time is required for their growth, and when matured, they require much more labor in gathering the leaves, as it must then be done by the use of the ladder, and the leaves are no better suited to the object in view than from somewhat younger plants.

Varieties of Trees.—Some of the choice trees which are produced from the white mulberry seed, are generally esteemed best by silk growers. It is a well-ascertained fact, that the mulberry, like the apple, pear, and peach, does not produce its like from the seed, and it is therefore a safer method to depend on cuttings of the best kinds, as they can be produced at but a trifle more cost than from the seed. The kinds most used in Northampton, Mass., where a large quantity of silk is produced, are what are termed the Asiatic, extensively used in China, and the Alpine, a species brought from the south side of the Alps by Mr. Samuel Whitmarsh when he visited Europe some years since. He says, though better adapted to the purpose of feeding worms than any he met with in France, it was limited to a small district. These are doubtless selected varieties from the white mulberry seed; but as they unite all the essential qualities to a greater extent than any others, whenever they thrive well on a soil, it is wise to adhere to them. But it is prudent to sow a quantity of seed, and as the plants grow up, select such as are best suited for feeding. The charcteristics for this can usually be distinguished by the appearance; though perhaps the only strict test would be, a comparison of the quantity of silk produced from equal quantities of leaves. The above varieties are distinguished by a tolerably large leaf, twice or three times the ordinary size of the common white, yet not as large as the Morus. The leaf is firm and thick, and affords a large supply of substantial food for the worm. It is highly important that the leaf be not too juicy or succulent, as the worm is by this means obliged to consume a much larger bulk of food to derive the required amount of nourishment, than would otherwise be necessary, which renders the worm peculiarly subject to disease. The morus multicaulis, we are sorry to say, after all the eulogium and attention it has received, is illy adapted to producing silk. Like many of the Wall-street fancy stocks, it was a capital stock to speculate on, and like many of them, too, the amount of sales was no index of the value of the article. Like the red and black mulberry, the multicaulis will produce silk, *but not of the best quality*, and there is so much sap in it, that the worms are very liable to disease while feeding on it. We believe growth of these last kinds on a dry sterile soil will increase their value for feeding, and diminish the liability to disease in the worm.

The best mode of raising the trees, is placing them about 4 feet apart on one line, and 6 to 8 feet, according to the fertility of the soil, in the other direction. This will allow sufficient room for the top to develope itself, and absorb all the nourishment afforded by the roots. The ground should not be too rich or moist where the trees are planted; a moderate quality of soil, of a dry gravelly nature, produces leaves of more substance and less liable to injure worms than ranker ones. They may be propagated from seedlings, but this, we have seen above, is not a certain way of producing good varieties, and should be resorted to only to supply existing deficiencies, and perhaps occasionally to produce a new and valuable variety. The best mode of producing them is by cuttings made from a healthy, vigorous shoot, consisting of two buds to a stock, each of which is put into fine, mellow mould in a slanting direction, placing one bud deeper in the ground than the other, so that one almost invariably sprouts, and generally both.

The mode of cutting leaves, may depend upon the fancy of the proprietor and the circumstances of the case. The feeding is performed with much greater facility when the branches are cut off and laid on the shelf in the form of net-work, as the worms crawl over them in every direction: thus gaining more room, keeping out of the dirt, and allowing a free circulation of air. But the plant should be so trimmed as to allow a bushy top, and not be suffered to get up too high, beyond reach of the person gathering the leaves; although there is no inconvenience from this while the stocks are not too large to admit of bending down to be cut. Though we have seen no plants thickly cultivated that have attained sufficient diameter of trunk to enable us to form an opinion, our own impression is, that after the main stalks have a circumference of 8 to 10 inches, it will be best to cut them down and train up fresh shoots. But experience will be the best guide in this matter.

Kinds of manures and mode of treatment.—Mr. Whitmarsh, in a small work he wrote on this subject four years since, which he was kind enough to present us the other day, with the remark that his subsequent extensive experience had not induced him to vary from the practice therein described, says:

> Light land, planted with the mulberry will yield a large profit by the sale the leaves only, or by having them fed on shares.
>
> Every farm has more or less of black vegetable matter collected in hollows and swamps, usually called muck, which is the best manure for the mulberry, causing it to flourish on very light and sandy soils. The muck should be thrown up in the fall to freeze and sweeten, as the gardeners say; before planting the trees, put it into the furrows or holes, and the trees, once started in it, will continue to flourish for many years. No mulberry tree should be manured with fresh barn manure; it is rank poison to them, and is one great cause of their being winter-killed. The well rotted vegetable matter above mentioned is the best and most durable manure. It causes a thrifty natural growth. A little ashes or lime may improve it in some cases. Old woolen rags, bones, fish, and all animal substances are useful; but the muck, which is within the reach of almost every one, is the cheapest, and on a large scale, the main thing to be depended on.
>
> Mulberries, when planted out, should be kept clear of grass and weeds, and the ground loose about them. They delight in a mellow soil, and when once well established in a healthy state, will continue to improve for twenty-five years, if well used. We are told by some, that "the more you pick them, the faster they will grow," the fallacy of which must appear to every one who will for a moment consider the nature of the operation of stripping a tree of its foliage once or more every season.
>
> We are also told that several crops may be fed from the same trees in a season;—this you may do if you do not regard the durability of the tree. Once a year is quite often enough to strip them of leaves or branches. Several crops of worms may be fed in a season, but not from the same trees. Trees enough should be provided to make a second picking unnecessary. We have land in abundance; and the same building may accommodate a succession of crops fed from a succession of acres.
>
> I would not have my readers place implicit confidence in what I say on this subject, as I may be mistaken. But let any one who doubts it try the experiment;—set apart a few trees, no matter of what sort, and pluck the leaves as many times in a season as you please; it is *possible* that the leaves may diminish in size and quantity by the operation, and it is also *possible*, that after a year or two, there will be no leaves at all, that the trees will perish in summer or winter—most likely the latter. It should be considered that what is called a hardy tree is not merely one that will endure cold winters, but the clipping, picking, and hard usage which they will be likely to receive according to our mode of treatment, when they come to be fed from.
>
> In making a plantation for the culture of silk, we must suppose it, of course, to be a permanent one, which shall be a continued source of profit, the profit

increasing with the age and growth of the tree, if well used: and nothing is better repaid than good care and cultivation for the mulberry. We shall need much less care than the cultivators of Europe, as the mulberry thrives much better in this country and makes a much more luxuriant growth,—so much so, indeed, that I have seen intelligent men, who had extensive acquaintance and experience with the mulberry in France and Italy, quite at a loss amidst our fields, to recognize their old acquaintance—varieties which they have long cultivated at home, here quite changed in appearance. They could scarcely believe the fact, when shown a year's growth of the mulberry in this country.

The mulberry delights in the hottest sunshine,—never too hot, if moisture is seasonably supplied. Our bright sunshine and frequent showers cause an almost too luxuriant growth of the mulberry, in some cases detrimental to the worms.

The leaves are undoubtedly improved by the age of the tree, having less of the rough, harsh taste and feeling that are common to the plants of younger growth. It is found in Europe that the worms succeed best when brought out simultaneously with the leaf. They are generally hatched much later in this country, and the general character of vegetation differs so materially from that of the silk districts of France and Italy, and withal so extensive is our country, and so various its climate, that I can give no better rule than for the *North* to aim at the most genial and steady heat, and for the *South* to endeavor to finish the crop before the hottest season commences. Excessive heat is more to be dreaded than cold. Cold only retards the worms; excessive heat destroys them. An equal temperature of about 72 degrees of Fahrenheit is most to be desired.

The soil must be warm, gravelly, or sandy. It is often said, that "the poorest land is the best for the mulberry." It is not so. It may with truth be said, that the light lands of a farm—too light for a profit in other crops may be most advantageously planted with the mulberry, and in a few years, by proper treatment, be made more profitable than richer lands planted with other crops. I have seen many acres set out with mulberry trees, the soil so poor that blackberry briars would starve; whilst mulberry trees from four to eight feet high, with full heads were set in the barren sand; and because they would not *begin* to grow, "the silk business was all moonshine." Now, had the holes been filled with *muck*, and *the heads of the trees cut off*—poor as the soil was, they would have made a good growth, and in a few years, when well rooted, produced a good crop of silk.

Lands that are considered worn out for corn or cotton may thus be made productive, and of the best silk. The mulberry strikes its root deep, and when once established, will do better on light lands than any other tree. Lands which will not grow twenty bushels of corn to the acre, manured, are quite strong enough for good silk, if on a gravelly or sandy bottom. Such lands, by the application of ashes, lime, mud or muck or compost of all kinds, will produce vigorous trees, with the sweetest foliage, and silk of the best quality, and much more than lower, richer lands. It is the *dry* nature of the leaf on such lands that makes the silk so superior.

Having thus given the first steps to be taken on the subject of silk culture, we must deny ourselves the pleasure of pursuing it further in this No. for want of room, but will continue it hereafter, till we furnish the silk handsomely done up in skeins. We cannot here omit mentioning the fact of the splendid success of Mr. W. in the introduction of the silk business in Jamaica, W. I. He has been a resident there for two years, in which time he has so satisfactorily demonstrated the capabilities of the island for producing silk, that a company has been formed in London, to which the British Government have contributed largely, with a sufficient capital to carry out the operations on the most extensive scale. Mr. W. hopes for a yield of 10,000 lbs. of reeled silk per month; but this, we think, is too large an amount to look for from any one establishment. We see in this the ever watchful, ever liberal policy of Great Britain, in appreciating and fostering whatever is calculated to promote her own interests. Here are two magnificent productions, silk and cotton, which are essential to the prosperity of her manufactories, and which she cannot raise on her own soil; yet she has the sagacity to see, and the liberality to encourage at any cost, their introduction into her provinces, by which she will in a few years inevitably increase her wealth to an immeasurable extent. Mr. W. has an elevation on one of the mountains that abound in those islands, a few miles from the coast, that affords an unvarying temperature of 70 to 75 degrees, which is the best adapted to the operations of producing trees and silk. The condition, character, and habits of the emancipated inhabitants, he represents as in the highest degree favorable to the development of the resources of the island. We wish him every success in his undertaking.

Preservation of Grapes and Must, or the Unfermented Juice of the Grape.

Among the many striking changes that characterise the present day, perhaps none are more auspicious or salutary than the diminished and constantly lessening use of alcoholic and vinous drinks. The effect that has already been produced, has begun to be severely felt by the agriculturists of this and other countries. The sugar planters of the West Indies have found it impossible to dispose of so large a portion of their rum hitherto manufactured from their coarse sugars and molasses; and the inhabitants of the Mediterranean can, no longer distil their raisins into alcohol, at the same profit as heretofore, and the wine they have hitherto furnished in such large quantities from the direct fermentation of the juice of the grape, is daily becoming less an object of manufacture. The distillation of millions of bushels of rye, and corn, and other products in our own country, has lessened, and even the wines we have made to a considerable extent to the south and west, will not, it is believed, continue to afford a profitable sale. Large quantities have, for many years, been furnished from the Swiss settlements on the banks of the Ohio; and from 6,000 to 10,000 barrels are annually furnished from the Scupenaugh grape in North and South Carolina, which finds a profitable market in our city under the captivating title of London particular, Teneriffe, Sherry, &c.

The cultivation of the grape is extending, perhaps, at this moment, faster than at any former period in the history of our country, and as our forests are removed, our lands cultivated, and our improvements in every species of farm husbandry multiply, we must look for an increased attention to the luxuries of life, among which the grape especially, in ancient times, ranked as one of the first. Our object in the present brief article is not to discourage the production of this delicious fruit, but in accordance with the spirit of the age, to give some directions for its preservation and use in its new, more delicious, and more healthful forms.

Many species of the grape itself may be preserved in all their richness and perfection, by simply cutting off the clusters and packing away carefully from the influence of the atmosphere in any close vessel, between layers of some soft indestructible material, to prevent their injury from pressure or otherwise. Sawdust or any kind of bran which has been thoroughly baked, is best for this purpose. The moisture is thus entirely expelled, and it is in a condition to absorb any moisture that may escape from the fruit, by which its preservation is effectually secured. In this way the grape may be preserved for use through many years, and afford at all times the most delicious fruit for entertainments or deserts.

But its more easy and more durable, and perhaps, on the whole, more useful preservation, would be in the form of a liquid, which is, under all circumstances, and for any length of time, free from liability to injury or waste. This can be easily done by any one having a surplus of grapes, by evaporating a certain portion of the juice, as soon as it is pressed from the fruit, which carries off the alcohol that begins to form immediately after the fruit matures, and with it a considerable portion of the water existing in the juice, leaving a thick, sweet, pleasant liquid, commonly distinguished as *must*. This may be preserved in bottles or casks for an indefinite period, and affords at all times, when diluted with 5 or 6 times its bulk of water, a healthful and delicious drink.

This innocent, and to the unvitiated taste, most acceptable form of the liquid fruit of the vine, is on good authority, supposed to have been the beverage which was *generally* referred to by the sacred and many of the profane writers, by the term *wine*. In direct proof of this, we have numerous allusions by Isaiah: "new wine is found in the clusters," and "now shall the sons of the strangers drink thy *must*;" and "they that gather the vintage shall drink it." In the feast of the Passover, Moses writes expressly, "neither shall there be *leaven* seen with thee in all thy quarters," which Gesenius, an able orientalist, says, applies to *wine* as well as bread, an interpretation sanctioned by the Jews of the present day, as no *wine*, in its common acceptation, is used by them during this period, but a liquid, formed by steeping raisins in water for some days, which yields a product similar to the juice of newly-expressed grapes. The expression "*eat* ye of the fruit of the vine," and "I will give the *fruit* of the land, corn, and *wine* and oil, and kine and flocks of sheep," can refer only to the use of the *unfermented juice of the grape*, which was in general use by the Hebrews and other ancient nations, and in this condition, is a highly nutritious *food*, which the fermented is not. "The priest of the Most High God brought forth bread and wine" to Abraham and his hosts, and it is not likely that so discreet and exemplary a man as Melchizedek, would have placed the means of indiscriminate debauchery in the hands of an uninformed and gluttonous soldiery Zechariah says, "Corn shall make the young man cheerful, and *new wine* the maids." We have no evidence that the lords of creation have ever indulged the weaker sex in stronger potations than they allowed themselves, and of course must conclude, the *wine* they gave the fair Jewess, no more calculated to intoxicate them, than the corn they ate themselves. "*Wine* and milk," are frequently associated in the Scriptures as *food;* both Isaiah and Solomon in his Canticles, repeatedly mention them together, and *must*, though liquid, like milk, is nutritious food.

Homer also speaks of rearing *children* with honey, milk, and *wine*—could a person of Homer's capacity have recommended *fermented* wine for children? Milton in his immortal Paradise Lost says, "For drink, the grape she crushes, inoffensive *must*, and meaths from many a berry;" a graphic example for our comfort-providing housewives. Horace too, the dissipated pander to a luxurious and vitiated taste, steeped in all the vices of a dissolute court, advises—

> "With *lenient beverage* fill your empty veins,
> For *lenient must* will better cleanse the veins."

Juvenal, among the last of the great wits of depraved Rome, recommends the plentiful use of new *must*, as promoting longevity; and Virgil in many instances refers to it, only one example of which we give—

> "Or of sweet *must* boils down the luscious grape;
> And skims with leaves the trembling cauldron's flood."

He also advises giving *wine* to bees, as do also many of the best old English writers on agriculture, and we need not be told, that bees were always too strictly a temperate community, to admit their using aught of the product of the grape but such as was unfermented. Columella gives particular directions for its preparation, as does also Pliny and some others among the ancients. Mr. Brown, an eminent traveller in the East during the latter part of the last century, says, "The wines of Syria are most of them prepared by boiling immediately after they are expressed from the grape, till they are considerably reduced in quantity, when they are put into jars or glass bottles, and preserved for use."

That fermented wine was used to some extent by almost all the nations of antiquity, there is no reason to doubt, as Noah became intoxicated from its use, and Moses refers to the Pagan sacrificial wine, in colors too true of much of that of the present day, to admit of its being other than fermented: "Their *wine* was the *poison of dragons*, and the *cruel venom of asps*." The evidence for the existence of both is abundant, but our object is only to show, that at least a large portion of what is referred to as *wine*, was what is now termed *must*, and that by returning to this wholesome and innocent beverage, we are only going back to the simplicity and wisdom of antiquity; and with the few observations which follow on its preparation, we must close this hasty article.

As soon as the grape is fully ripe, press out the juice and boil immediately, till it stands at 32° of Beaûmè's saccharometer,* at a temperature of the liquid of 60° Fahrenheit. When the juice is very light, (weak,) boil till it marks 20° Beaûmè, and then add treble-refined loaf sugar, till the saccharometer stands at 32°. Any impurity in the sugar tends to fermentation and decomposition, and of course only the best refined should be used. The rationale of this process will be easily understood from the fact, that a fluid mass of wine containing 10 per cent. of alcohol, has only to be reduced by boiling 10 per cent. of its bulk, to be sure of expelling every portion of alcohol; it being the most volatile portion of the liquid, and thus escaping first before any portion of the remainder of the fluid is exhausted. Those who cannot boil it at the time of expressing the juice, may allow it to ferment and form a portion of alcohol, which by the above process may be expelled afterwards. But as a portion of the sugar of the juice, has, by this operation been converted into alcohol, it is necessary to restore it as above described, by the addition of sugar. In this way wine imported from abroad, and kept for any number of years, may be freed from alcohol, and be made acceptable to the most strictly temperate. Of course the most economical method is to raise the grapes, and prepare the must as soon as ripe.

Sheep on the Western Prairies.

We have received a communication from Jas. Murray, Esq., of Buffalo, on the subject of keeping sheep on the prairies of the Little Vermillion river, La Salle county, Illinois, where his farm is situated.

He purchased 1,700 sheep in Ohio and Indiana at 75 cts. to $1 per head. He chose those of the black-faced breed, because he thought them most hardy, they having a strong resemblance to the Cheviots of Scotland. They are managed by two Scotch shepherds, with the assistance of three colley sheep dogs. They are taken on to the prairies by dogs, and folded every night in an enclosure of ten acres, protected by a high picket fence; in this way he has never lost one from the wolves. The cost of the pasture is trifling, the board and wages of his shepherds $16 per month. One ton of hay will winter five sheep with the assistance of a few oats or corn to keep them in heart. It costs about $2 per ton to cut and stack the hay. He uses one barrel of salt per month, and the sheep have ever been perfectly healthy. He lost six only last year from rattle-snakes, and these were in Aug. and Sept. at which time the snakes become partially blind, and cannot avoid the sheep; and if trod upon, they turn and bite them. We would suggest, if hogs were allowed to run with the sheep, they would destroy the snakes without injuring themselves, and the Chinese breed, or smallest and most compact Berkshires, would keep in good order on the same pasture where sheep would thrive. Mr. Murray's sheep clipped 3 lbs. of wool per head this season. Cost of importation from Vermillion to Chicago 1-2 cent per lb., Chicago to Buffalo 1 cent, Buffalo to New York 1 cent, making 2 1-2 cts. from his farm to this city. The wool is now worth 20 and 25 cts. per lb.; it will therefore be seen, that growing good hardy sheep on the prairies of the west is a profitable business, and what we have long and earnestly, in a private way, been laboring to promote.

---

* An instrument to be had in this city.

Land suitable for the purpose can be had west for government price, $1 25 cts. to $4 per acre, dependent upon location and improvements. Mr. Murray's farm is about 1,600 acres of very fine dry rolling prairie. About 300 acres of this is in scattered timber, called oak openings, which are much like the English parks. When the weather is hot the sheep retire to these for shade; during the cool of evening they seem to prefer the low marshy land along the stream. Mr. Murray is partial to many of the natural grasses of the prairies, and says the sheep thrive well upon them. The milk weed, *Asclepias*, they are very fond of, and fatten remarkably fast upon it.

A simple method is adopted by Mr. Murray of seeding the prairies with the cultivated grasses, by commencing in June, and burning the wild grass gradually through the season, in 30 acre patches. White and red clover, red top, timothy, and blue grass seed are then sown, and immediately after a shower the sheep driven over it, which stamps the grass seed in, and it then takes root rapidly. Early and late natural grasses can also be secured, by burning the prairies in Sept. for early, and from March on to July for spring, summer, and autumn.

The picket fence round the ten acre field is 7 1-2 feet high, over which no wolf has ever yet leaped; this, with a sufficient number of sheds to protect the sheep from storms in winter, and with hay-racks for feeding, cost $263.

Mr. Murray is now inclosing his farm in 50 acre lots. Timber is scarce there, and he makes his fences 5 1-2 feet high, of posts, and boards, and pickets. Two feet of the bottom with boards, then 3 1-2 feet of upright picket slats, 4 inches wide. This costs 90 cents per rod, is cheaper in that country than rails, and is neater and more sightly. It costs about $1 75 per acre for the first breaking up of prairies. He thinks of adopting the four course system on his farm. 1st year, after breaking up, Indian corn. 2d year, oats sowed down with clover and other grass seeds. Two years then in hay and sheep pasture. We are confident that his land will improve under this system, and that the whole concern will be a good investment. We think, however that the fine wooled sheep, such as the hardier varieties of Merinos, would be more profitable than the black faced Cheviots, or indeed than any of the common wools, yielding half to one lb. more wool per head, which will be worth 50 per cent. more in this market, (N. Y.) while the cost of transportation would be the same. The outlay of capital, in the first purchase of a flock, however, would be greater, which is the only consideration in favor of omitting the introduction of the finer wools at once.

Soiling Cattle.—We are satisfied many of our Stock owners might adopt the soiling system to great advantage. When they have few animals and pasture is remote, or whenever land is high, it may most advantageously be adopted. We were particularly struck with the economy of this operation in the yard of our friend S. L. Hinckley Esq. of Northampton, which we intended to have noticed under the farming head of that town. The stock at his residence consists of three horses and two cows, which instead of sending daily to a distant pasture, he has fed at his yard during the whole season, from less than one and a half acres of orchard grass. The horses while at work were fed with cured hay, with a small addition of grain, but the cows have derived all their food from the grass which is daily cut for them. The saving by this practice, is the use of three-fourths of the land, at least, that would have been required for pasture; a much greater amount of manure, which has been made by converting it into a compost; and half the time that would have been used in sending the animals to gather their own food; the field from which it was cut, being contiguous to the barn-yard, requiring only to be cut and thrown over to them.

Effect of wet and dry summers on the succeeding winters.—We predict a cold winter, from the reduced temperature of the earth when the fall sets in, which will be caused by the abstraction of heat from the excessive evaporation of the superabundant waters which have fallen this season. Can any of our readers give us facts from personal observations on this subject? It will be a principle of great practical value if suf ficiently well established, that people may prepare their plan of operations for the coming season. Hundreds of dollars are frequently lost or saved to the farmer, by a lucky or unlucky hit in their crops, timber, and other operations. The converse of our proposition was true of last year, the summer being very dry, by which there was little evaporation and consequently little abstraction of heat, and the winter was of a peculiarly mild character.

Effect of electricity on growing plants.—We have had a season of unusual thunder storms, and a season, too, of unusual productiveness, notwithstanding the cold and unpropitious character of the early part of it. Some would ascribe the cause of it to frequent and abundant showers, and with considerable show of reason, but the excess of rain which we have had this season throughout, is not the most favorable condition for the greatest development of vegetable life. Can that very reputable personage, "the oldest inhabitant," give us a series of well authenticated observations on this subject? We know that the electric spark conveyed through air enclosed in a jar, will produce nitric acid, and we know that no greater stimulant to vegetation exists, than nitric acid sufficiently diluted, when applied to its roots. Although we are not aware of any direct advantage that would result at present from establishing the above suggestion, yet it would afford a philosophical principle, that may hereafter be of immense benefit in its application.

ORIGINAL CORRESPONDENCE.

For the American Agriculturalist.

Weybridge, Vt., July 15, 1842.

Gent.—I have been very much amazed to see so many portraits of fine animals of the long and middling woolled breeds, got up to ornament our agricultural journals, and at the same time the non-appearance of the finer woolled varieties, which are the only indispensable breeds of our country.

I am satisfied that the Paular Merinos are the most profitable and most hardy breed of merinos that have ever been introduced into the United States.

I have enclosed a drawing of one of my stock bucks, which represents him in his wool at about one years' growth. At the age of four years he weighed just 150 lbs., the fleece was taken off about eight days after it was washed, and weighed 14 lbs. This Paular buck has tupped each year, on an average, one hundred and twenty-three ewes. I shall keep him with extra care, intending to give him a run among two hundred this fall. His stock, instead of being hollow or cat-hamed, as most fine woolled sheep are, are round and well filled down behind, rembling the improved breeds of cattle. You may see some of my bucks at the fair at Albany in Sept. next.

I would like to see the contrast exhibited between this breed and some of the crack animals of the long woolled breeds, or *bread and butter sheep*, kept in fields side by side on trial of six months, (say one hundred or more,) in short pasture; and by the expiration of the time, I imagine the *points*, especially of the long woolled variety, would be *strikingly developed.*

I allow my ewes to drop their first lambs at the age of three years. My ewes bear the best lambs at the age of five and six. I generally dispose of them at this age, while they are yet in prime and will sell for a fair price. I always dispose of my smallest lambs also. This variety are the longest lived sheep of the merino family; they will live and propagate until the age of twelve and fifteen years.

As to protection on our wools, the admitting the cheap wools imported from foreign and warmer latitudes with little or no duty, is, in my opinion, reducing the value of our home productions to a lower ebb than it would be if the coarse wools paid an increased duty, and the tariff on fine wools were sensibly reduced. It is estimated that something over 17,000,000 lbs. have been imported within the last year, under the foreign cost of eight cents per pound.

Our mechanics have so much improved machinery, and have arrived to such perfection, that the manufacturer can now make as handsome cloth from these cheap wools today, as he could from full-blood merino twelve years ago. These cheap wools can now be raised in those foreign climates where sheep cut their own fodder the year round, and thence be imported into the United States and sold by the bale at from seven to twenty cents per pound, and give the producer and importer a handsome profit. Now mark the contrast. Here our lands have cost us from twenty-five to thirty dollars per acre, and we fodder sheep five months at least in the year. Our farms will keep two sheep to the acre through the year, including wood lots and other indispensable et ceteras. I will leave it to the most simple mathematician to cypher out our profits, as wool is selling this year.

Yours, very respectfully,
S. W. Jewett.

The drawing which Mr. J. has sent us, together with samples of wool accompanying the above, represents an animal of great size, good form, and apparently vigorous constitution, which his history sufficiently indicates. As we are collecting some information on the history of Merinos, we should be happy to receive from Mr. J. and others, the pedigree of choice animals, for the purpose of seeing how their acclimation in this country has affected their size, constitution. and especially the *quality of their wool.* We have the data of their character when imported, and it will afford an instructive chapter in sheep husbandry, to note the exact progress we are making in this important branch of breeding.

The protection Mr. J. so justly calls for to save our investments in sheep from prostration or total ruin, we trust will yet be heard and heeded in the right quarters, before it is too late.

For the American Agriculturist.

Domestic Poultry.

Gent:—Under this head I shall speak of the Barn-door-fowl, as usually kept in our country. It is true that the subject is not so lofty as that of discoursing the merits of a noble, fleet and powerful breed of horses; or of the broad and stately developments of our various improved herds of cattle; nor so nice as that of dissecting with minute accuracy the distinctive merits of the wools of the Saxony and the Merino; nor so palatable, perhaps, as the classifying with epicurean taste the comparative gastronomic properties of the Bakewell and Southdown sheep; yet the good housewife who loves to mix the wholesome ingredients which compose the important parts of her delicious puddings, custards, and the various delicacies that delight her family, and make her friends and visitors *feel* that they are welcome; as well as the stout admirer of a rich and wholesome dinner, and a capital travelling breakfast, will without a doubt, feel interested in whiling away a moment over a chapter on the merits of the poultry yard.

Of this useful and most convenient bird, there are many varieties. Some altogether better suited to the extremes of our northern climate than others, and some perhaps better fitted for our warmer latitudes, which are comparatively worthless at the north. For my own part I have always been intimately acquainted with poultry from a boy, and the first live thing that I ever recollect owning and caring for, was a chicken; and I have kept, and raised them, with few intervals, ever since; and and even now, although the detail of their care is given to others, I as much control and attend to the breeds and varieties of my fowls as I did in my earliest youth. Therefore disclaiming all authority from others, I speak only of my own experience. Of the varieties inhabiting the United States, I have kept and tried them all, from the gaunt and almost featherless, and thin haired African or Asiatic Hen, to the compact and foot-feathered little Bantam, which thrives and flourishes in half the washerwomen's kitchens of our cities. The latitude of my residence is nearly 43° north, with comfortable, well sheltered outbuildings and accommodations for their convenience, and I shall speak of them only as I have known them in *this* climate, and name their qualifications for a latitude further south.

And first of their selection. A barn door fowl, for perfect *utility*, should be compact in shape, hardy in constitution, and miscellaneous in its food, quiet in disposition, and prolific in laying. Without these qualifications, no matter what the climate may be, the creature is imperfect for the uses required of it, and therefore not the *most profitable* to be kept or propagated—still, I will speak of the several varieties as *I have proved* them.

The Game Bird.—This is a beautiful fowl, of medium size, of almost every color excepting pure black and clear white; a tolerable layer, hardy to raise, and nice delicate flesh; but of a most pugnacious, cruel and sanguinary disposition. They are altogether too quarrelsome for the poultry yard; and as the science of cock-fighting does not class within the useful arts, I shall pronounee them, other than as an occasional cross to give stamina and spirit to a deteriorated and *run-out* yard of dunghill fowls, of little merit for the ordinary breeder.

The Malay.—An awkward, bony, leggy, cowardly race; wandering about for the first six months of its life with scarcely a feather to cover its nakedness, and almost forever in coming to maturity—a wretched layer, and worse sitter, usually breaking half its eggs in the operation, an indifferent nurse, and never yielding in either its eggs, flesh, or appearance, half enough to compensate for the anxious and vexatious labor of its rearing. When half grown, or in moulting time, it looks more like a sand-hill crane than a domestic fowl, and although it sometimes gains a weight of 7 or even 10 pounds, its flesh is coarse, and lacks the delicacy and richness of the well bred chicken. Its color runs through all shades from a light yellow to a brownish black, with little variety on the same bird. They are withal great eaters, and although at the south they may both thrive and lay better than at the north, they are not to be recommended as a valuable kind of fowl. Their eggs are large, of a buff, or light brownish color, sometimes almost speckled like the turkey's. They seldom lay more than ten or twelve at a litter. The outer shell is oft times very thin, and the under skin so tough and unyielding, as in numerous instances to strangle the chicken in its birth, requiring assistance to release it. On the whole, I have found this a most unsatisfactory bird, and although they have been praised for their great size for the table, and as a tolerable substitute for a turkey, no competent judge of the latter flesh would ever mistake the stringy and juiceless meat of the one, for the rich, delicate and variegated flesh of the other; and what good-liver would provide the one, when the other, much better, could be procured at half the expense? Crossed, however, in a small degree with the common dunghill fowl, they give increased size both to their egg and body, and may, in mild climates be of some value for that object.

The Poland.—A shining black in color, with a beautiful white tuft on its head; a medium size, a good layer, seldom sitting to hatch, rather tender to rear while a chicken, and more thinly feathered and not so hardy in cold and storms as the common hen. In a great part of the U. States it will thrive successfully, and lay as many eggs as any other fowl, perhaps more. Its flesh is good. On the whole, a handsome and a profitable fowl. There is a white variety, without a feather of any other color. These are very beautifnl, but perhaps not quite so hardy as the black. There is, also, a splendid gold and black, or pheasant-colored variety. These are scarce in the U. States. I have seen several beautiful specimens imported from England, but was never able to obtain any for breeding. These colors are more propagated by the poultry fanciers than others, and are seldom to be had but of them.

The Bantam is a beautiful little bird, usually white in color, with short legs, feathered oftentimes to the extremity of its toes. It is often of variegated colors, inclined to red, brown, and white, prettily mixed. Occasionally a variety is met with that are smooth legged. They are very domestic, often making their nest in the kitchen and cupboards of the dwelling, when permitted. They are excellent layers, and good nurses; but require a dry location, on account of their short, feathered legs. The males are wonderful crowers, exceedingly pugnacious, and make three times the fuss about the poultry-yard that any thing, but a Bantam, should do. They arrive at maturity early, and are well worthy of propagation.

The Bucks County breed has received some celebrity in the neighborhood of Philadelphia, as a valuable variety of fowl, principally on account of its enormous size. I have seen many specimens of this fowl, paid some attention to its habits, and learned from those who have tried them, their principal merits. It is a large bird, weighing, at maturity, eight, and even ten pounds; rather thinly feathered, of various colors from grey to black, and frequently speckled black and white. They are coarse in their legs, tall, and bony, and have evidently a cross of the Malay in their composition. They are but moderate layers; their eggs very large and good. They are bad sitters, frequently breaking their eggs, on account of their great weight and size, by crushing them; are not hardy, and, on the whole, will not compare with the common dunghill fowl for ordinary uses. They do not breed *equally* in size and appearance, showing them evidently to be a cross from other breeds; but from what they are derived, other than the Malay, it is difficult to say. A gentleman of my acquaintance, who is very curious as well as nice in the selection of his fowls, tried them effectually for his poultry-yard, and they disappointed him. He then crossed them with the game breed, and has succeeded finely—the cross being reduced in size, fuller feathered, hardier, and better layers, with an excellent carcass, and finer flesh. As a fancy fowl, or to make up a variety, they are very well; but can never become of great *utility*, except to cross with the common or the game fowl, to the farmer.

The Java or Indian fowl, is a large coarse bird, covered with a coarse long down or hair, of a dirty white or yellow color, and running from that into all the shades of brown, even to a smoky black. It appears to differ little from the Malay fowl, save in its crowing, and perhaps laying deeper colored eggs. Its general characteristics are the same. In the northern states it is hardly worth propagation, and, as a fancy bird, it certainly possesses neither beauty nor utility.

The Dorking is a fine large bird, weighing, when at maturity, five to eight pounds. They are large-bodied, and of better proportions, according to their size, than any breed that I have yet seen, their bodies being very long, full, and well-fleshed in the breast and other valuable parts. They are short legged, thickly feathered, with fine delicate heads, both double and single combs, and a shining, beautiful plumage. The color of their legs is white, or flesh-colored, having five instead of four toes, the fifth being apparently superfluous, and rising like a spur from the same root as the heel toe in the common varieties. This is a distinguishing mark of the variety. They are most excellent layers, good and steady sitters, and kind, careful nurses. Their color is various—from nearly white to almost black, many of them beautifully variegated. They are the capon fowl of England, and are bred in great quantities for the luxurious tables of the wealthy classes, in the counties about London. In America they are a scarce bird. I never saw one till the fall of 1841, when a friend, by whom I sent, brought me out half-a-dozen from England; and although they were but chickens when they arrived, and, from their long confinement on the voyage, miserably poor and full of vermin, they rapidly improved, commenced laying during the winter, and have, thus far, exceeded any other fowls I ever kept, in their good qualities. Their young have proved very hardy and easy to rear. The males, of which I imported two, are large strong birds, and the hens are all I could desire of them. Their eggs are of large size, clear white, and excellent in quality. For capons, they no doubt exceed all other fowls whatever, often weighing, full grown, ten or twelve pounds. This variety I have determined to keep for my own purposes.

The only other distinct varieties from the above-named with which I am acquainted, are the common Dunghill fowl, which runs out into all the various ramifications of Creeper, Rumpless, Dominica, &c. &c., and are to be met with in every farm-yard of the country. Of their respective values, different opinions and fancies prevail. They are, doubtless, all good; and to those who are curious in their poultry, many beautiful, choice, and excellent birds may be selected from them for a choice poultry-yard. But to one who admires a *true breed* of fowls, none can be relied on but those of *distinct* characteristics, belonging exclusively to their one variety.

I might here enlarge, and go into the various methods of rearing fowls, and speak of their treatment, accommodations, &c.; but as this was not within my purpose when penning the above, I refer the reader to the various treatises on those subjects, or, what is better, to any good, experienced housewife, on almost any farm in his neighborhood. The rearing of chickens, and care of a poultry-yard, is not among the *abstruse* sciences.

L. F. A.

Black Rock, August, 1842.

For the American Agriculturist.

Uses of Charcoal as Manure.

Gent.—From an article on Dr. Liebig's Organic Chemistry applied to Agriculture, in the April number of the North American Review, it appears that the most valuable property of a soil, is that of absorbing and giving off those vapours and gases that constitute so considerable a portion of the food of plants. Reflecting on this fact, it occurred to me, that charcoal might prove a most valuable manure; from its well known capacity of absorbing vapours, gases and saline solutions, and under certain circumstances giving them out.

The ladies make use of charcoal in their flower-pots, from an experience of these results. At this time I did not know of its being used on a large scale. I communicated the idea to Mr. Phineas Sargent, and he remarked he did not know that it had been used as a manure; but that he had often observed the charcoal hearths were more productive than the surrounding land. I made further inquiries of Mr. A. B. Allen on the same point, and he had the kindness to furnish me Mr. J. H. Hepburn's valuable paper, "Charcoal as a Manure," published in the Trans. of the Ag. Soc. of N. Y. p. 298

1842. I was not a little gratified to find my speculations sustained by so accurate an observer.

As Mr. H. declined to enter into the chemical character of charcoal, I propose to supply that portion of the subject compiled from such writers as are within my reach.

From Ure's Dictionary of Chemistry, article Gas, we extract: "Of all solid bodies, charcoal is the most remarkable in its action on the gases. In M. De Saussure's experimet, the red hot charcoal was plunged under mercury, and introduced after it had become cool into the gas to be absorbed without ever coming into contact with the atmospherical air.

"One volume of charcoal made from boxwood

absorbed of ammonia, - -	90	volumes.
Muriatic acid gas, - - - -	85	"
Sulphurous acid, - - - -	55	"
Sulphuretted hydrogen, - -	55	"
Nitrous oxide, - - - - -	40	"
Carbonic acid, - - - - -	35	"
Olefiant, - - - - - - -	35	"
Carbonic oxide, - - - - -	9.42	"
Oxygen, - - - - - - -	9.25	"
Nitrogen, - . - - - - -	7.5	"
Gas from moist charcoal, -	5.0	"
Hydrogen, - - - - - -	1.75	"

"The absorption was not increased by allowing the charcoal to remain in contact with the gases after 24 hours, with the exception of oxygen, which goes on condensing for years in consequence of the slow formation and absorption of carbonic acid gas. If the charcoal be moistened, the absorption of all those gases that have not a strong affinity for water is diminished. Thus boxwood charcoal, cooled under mercury, and drenched in water, is capable of absorbing only 15 volumes of carbonic acid gas; although before being moistened, it could absorb 35 volumes of the same gas.

"Dry charcoal saturated with any gas, gives out, on immersion in water, a quantity corresponding to the diminution of its absorbing power. When a piece of charcoal which is saturated with either oxygen, hydrogen, nitrogen, or carbonic acid gas, is put into another gas, it allows a portion of the first to escape, in order to absorb into its pores a portion of the second gas."

Charcoal, when reduced to powder, will absorb but half the quantity of gas that it would when in the lump.

The advantage of this article over every other that has been used as a manure is, that what is not actually consumed or washed away is retained on the soil, and will continue to absorb and give off the vapours, gases, and saline solutions for an unlimited period. It would therefore be an experiment worthy of trial by our western agriculturists, to make their wood into charcoal and spread it on the soil, rather than to reduce it to ashes, which at most will last but a few years.

Yours, &c.,
C. H. Raymond.

Buffalo, Aug. 6th, 1842.

A long letter we have recently received from Dr. Freeman, in which his success at renovation of worn-out lands, by keeping a stock of hogs, the feed for which he had to purchase at first, as his land was too poor to produce it, is detailed at length. His experiments with the catch breeds of the country, till he procured the improved stocks, are amusing, satirical and instructive to a high degree. He says,

With many it is enough to have hogs that will gormandise and grunt till they are tired of feeding, without regard to the quality of their meat, amount of hide, bone, and bristles. One neighbor told me lately, that his pork cost him 25 cents a pound, and he only kept them to please his wife, that she might make souse and sausages. One was brought to my place, not long since, which I could not but ridicule; it looked as if it could distance a greyhound, and I was told by its owner, that as he could not fatten it he had saved it to breed from!!!

The owner had better point his hog's nose for Symmesonia, and follow at the tail of his beast, as neither animal csn be put to any profitable use in this region.

For the American Agriculturist.

Tallahassee, July 22d, 1842.

Gents: I have become a subscriber to your paper, and therefore take the liberty to make a few inquiries.

What is the best mode of keeping the weevil out of corn?

I have heard it said by some, that if you put a female animal to a male on the increase of the moon, that she will certainly become pregnant; but if you put her on the decline of the moon that she is not so apt to become pregnant. Do you see any truth in this assertion? How in the world does the moon affect the animal, or does it affect it?

Yours respectfully,
A Floridian.

Reply.

The weevil has been effectually kept from corn by spreading a layer of wild myrtle, (myrica cerifera), at the bottom of the corn crib, and alternating it through the entire heap. Fresh slacked lime, plentifully spread on the bottom and sides of the granary, will also prevent their ravages. Salt water sprinkled on the grain is said to have the same effect. It is kept from growing grain by sowing 3 or 4 bushels per acre while moist by rains or dews. Salt and lime, plaster of paris and saltpetre, are, as a general rule, useful for destroying grubs, worms, and insects; and if not in excess, never injure, but always promote the growth of plants. In France, undressed sheep skins, with the wool on unwashed, laid over and around the grain, have been found to attract and destroy the whole community of them. Locks of unwashed wool laid in drawers with woollen clothes, have been found in like manner effectual in destroying moths. Most of the herbs containing the essential oils and of pungent odor, have been found also, to drive away mice, insects, ants, &c., such as peppermint, spearmint, sage, &c. &c.

The Moon.—We think this vagrant, changeful, and not totally spotless vestal, has altogether too much notoriety either for her own reputation, or the good sense of her traducers. Time was, when she had the credit, from the notable husseys of Europe, and America too for that matter, and their better halves to boot, of all the ills that affected them, curdling their milk, uncurdling their cheese, preventing the butter from coming, spoiling the meat, now swelling it in the pot, and anon shrinking it, disordering the children, turning the heads of the young folks, and crazing the older ones; causing the domestic animals to cast their young, or stirring up strange and unnatural appetites in them; blasting the seed of the farmer, or withholding the expected crop; in short she was the chosen and prolific home, whence issued all the hobgoblins, witches, and sprites that afflicted fallen humanity. On the other hand, the poets and sentimentalists apotheosised her, as the fruitful mother, not only of all the chaster virtues, but as the harbinger of all good fortunes, and the bestower of benefits unnumbered to the human race.

It can hardly be said, as in most other extreme views, that truth lies between, as we conceive it lies no where in this controversy. The fair damsel is one of the sources of light to us, and for her mild, benignant rays, and at all times pleasant, varying phase, we bless her gentle presence. She is the favored recipient of many a poet's lay, and her silver bows are hung with the garlands, woven by the love-lorn lass, or her devoted inamorata; and she is always the kindly mirror to receive and reflect at the genial hour, the cherished forms of those we love in distant lands.

But divested of all sentiment, and taking the philosophical view of the matter, we are obliged candidly to confess, she has but little to do with nature's operations, who always deals with matters of fact alone. The moon, by her proximity and weight alone, acting in accordance with the general laws of matter, attracts and is attracted by our earth. The solid matter, from its adhesiveness, she moves not, nor stirs perceptibly the water in our inland seas and lakes. But on the vast body of the ocean and the atmosphere, she acts to a great extent, producing liquid and aerial tides. These have various influences on such animal and vegetable life, as are directly connected with them, and are fruitful of other phenomena. But with these, the plain farmer has little to do; and we may safely say to him, that in all his operations of seeding and harvests, and the multifarious operations of his farm, he will most effectually consult his own interests, and subserve the principles of common sense, by not consulting an old wive's fable, or old crone's legend, in connection with the moon. Impregnation is most effectually secured, by deferring the connexion till the animal is going out of heat

Preservation of Health.

The following judicious cautions as to the preservation of that invaluable blessing, health, by one every way competent to offer them, we cannot too earnestly commend to the careful attention of our readers. We anticipate with great pleasure, a series of articles on this and similar subjects, affecting human comfort and health, from the same pen.

For the American Agriculturist.

Gent: Probably in no portion of the community do we observe a greater degree of thoughtlessness and prodigality on the score of *health,* than among that portion known as the *laboring class.* To no portion is health of so much consequence as this—for with them it is not alone a matter which concerns its immediate blessings, such as personal enjoyment, longevity and capability of usefulness; but it is a matter which affects directly and intimately their means of subsistence. Health is (so to speak) their stock in trade: and the effect of any thing which deteriorates it, tends, just so far as it diminishes their strength and power of endurance, to diminish the productiveness of the "capital" which nature assigned to them.

This is a subject which it is of immense importance should be more generally considered, and correct principles diffused among those who have not leisure, opportunity, and too often self-consideration enough to prosecute inquiries and investigations for themselves. Not to occupy a disproportionate share of your valuable space, I shall restrict myself to a few suggestions, wholly of a practical character, which, I hope, may serve, at least, to excite reflection among those more especially interested.

As laborers are in a great measure without the influence of those causes of disease which arise from luxury idleness, and the unrestrained cultivation and indulgence of the passions, by far the greater number of the diseases from which they suffer arise from two sources, viz: atmospheric vicissitudes and malaria. Putting aside the operation of the use of the alcoholic poison, nearly *all* their ailments may be attributed to these two sources. The observance of a few judicious regulations of clothing, and habits of carefulness, with regard to exposure, would, doubtless, do much towards their protection from these morbific agencies.

Laborers are altogether too indifferent on the subject of dress. In cold latitudes in the winter season, the body of the working man, fully as much as that of any other individual, should be warmly clothed. They might know this if they would interpret aright the intimations of nature in her provisions for the health and comfort of animals. If simplicity of diet and physical exercise, had been enough, nature, who is ever economical, would not have invested animals with fur, wool, or feathers. This hint from nature might also lead to the proper choice of the substances from which clothing for the use of man is to be manufactured. It is not thickness, closeness of texture, or strength, which are the most useful properties. It is the non-conducting quality. The body furnishes its own supplies of caloric, and the duty of art should be to prevent its too great radiation from the body by interposing substances which do not easily permit of its transmission. Different substances differ very much in this respect; and we find that those which are instituted by nature for precisely this object, possess this property in the most eminent degree.

This explains the advantages of enveloping the body with *flannel,* the virtue of which resides chiefly in its non-conducting property; and which need not always be thick and heavy in its texture to secure, measurably, its value as a protective against atmospheric vicissitudes.

Silk is also an animal production possessing the same merit. Woven, raw silk may be classed next to flannel in its non-conducting power; and possesses the advantage of being less heavy and cumbersome. It may be used as a substitute, when flannel, from some peculiarity of constitution, is found to be irritating and uncomfortable. Should silk become one of the staples of our country, its use as an article of dress worn next the skin would not be the least of the advantages to be derived from its cultivation. At present it is too expensive for common use.

A vast amount of disease would be prevented if the laboring classes appreciated better the importance of flannel or silk as an article of dress. This fact does not rest wholly upon theory. It is well ascertained, that since the use of flannel shirts have been prescribed by the navy regulations of Britain and the United States, and generally adopted by sailors, the diseases of this class of laborers have very greatly diminished; and, certainly, as a class, they are more exposed to the influence of atmospheric vicissitudes than any other.

In many localities in temperate climates, it would be advisable to continue its use throughout the year; and wherever changes are sudden and great, this is especially important. Where the temperature is uniform, and variations gradually succeeding each other, it is less so.

The following principles in connection with this subject ought to be borne in mind:—

1. The liability to imbibe disease from this source is much increased when the body is much heated, perspiration abundant, and the powers of the system exhausted by previous labor or other causes. The laborer should always have means of protection at hand to meet these circumstances. He should be careful never to allow the perspiration to evaporate rapidly under the influence of a current of air. Upon ceasing labor, he should put on an additional garment, instead of divesting himself of those which he has on already. He should avoid lying upon the damp ground, &c. He should especially be careful of exposure at night, when the temperature of the surrounding medium is much diminished, and the susceptibility of the body greatly increased by the exhaustion consequent upon the labor of the day.

2. Another principle equally important is, that the effect of changes of external temperature upon the economy is greater, the greater the degree of heat to which the body has for some time previous been exposed. Thus, other things being equal, a lesser degree of atmospheric depression, will occasion a greater liability to disease in a warm climate, than a greater degree in a cold latitude. This indicates the importance of clothing the body in a non-conductor in hot climates—to which silk is admirably adapted. I believe much disease would be avoided by properly appreciating this principle.

A great deal might be said upon this branch of the subject, but I pass, to make a few remarks upon malaria.

What the nature of that agent is which emanates from certain marshy localities in new countries, we do not know. It is something which eludes the senses, and therefore, scientific analysis. But we know that its effect in producing diseases, depends, in addition to its own proper action, very much upon an aptitude in individuals to become affected by it. In this latter point of view much may be accomplished in the way of prevention by artificial means. Its operation is also promoted by some external circumstances which may be ascertained to some extent, and our habits determined in conformity to them.

My remarks, owing to my limited space, must be very brief. Generally, it is to be remarked, by maintaining the vigor of the body by the strict observance of all those conditions under which health in every situation is vouchsafed, we can do much toward protection from malarious influences. Temperance, proper protection from atmospheric vicissitudes, regularity, simplicity and uniformity in habits of life, regulated passions, &c.; all furnish us with much, if not entire security against so great an evil. It should also be recollected that the moisture of the atmosphere is the vehicle in which the morbific influence is contained and diffused, and hence, by avoiding exposure at night, early in the morning, and at certain periods of weather, the liability to disease is much lessened.

In connection with this topic I would add a consideration for the benefit of those who unfortunately suffer from malarious diseases. Providence has kindly furnished a specific for many forms of these diseases. It is the bitter principle which resides in the Peruvian and other barks, and which when extracted by chemical principles, and presented in a more concentrated form, is called *Quinia* or *Quinine*.

An impression very generally prevails that this is a remedy involving peculiar hazard, and that a variety of evils are apt to result from its use. This impression has originated with unprincipled nostrum-dealers, who wish to supplant a known remedy by their secret compounds, most of which owe all the virtue they possess, to the very article which they attempt to discredit.

The discovery of the febrifuge property of the barks was one of the most important ever made. It is calculated to prevent a vast amount of suffering and loss of life; and seems, in connection with the great exposure necessarily involved in the redemption of our national domains, to have been a specific dispensation of Divine benevolence for the benefit of the human race. That injury may arise from its injudicious application, must of course be admitted of this, as of all other remedies; but that its judicious administration is hazardous, as very many may be led to believe, is an error of great moment, and one which has been diligently fostered by a class of men whose motives are to speculate upon the credulity of mankind, and satisfy their mercenary cravings at the expense of their fellow beings.

I have already encroached too much upon your columns, and will therefore defer other considerations for another number.

Austin Flint, M. D.

Buffalo, July, 1842.

Mr. Edward W. Brewster, of Illinois, in a letter full of kind feeling and complimentary remarks, gives a brief account of this season's crops, which we subjoin. We have seen something of those immense agricultural and mineral resources which lie on the west side of Lake Michigan; and since our first acquaintance with the favored region lying between that lake and the Mississippi, we have thought, from its peculiarly varied and abundant advantages; its healthful climate; numerous streams, furnishing illimitable water power; its facilities for commerce, having, by the aid of the lake on one side and the "father of rivers" on the other, the choice of two markets; but especially from the high character for intelligence and moral worth of its inhabitants, it is destined soon to contain as dense, populous, and intelligent a community as is to be found west of the Hudson.

"Our harvest is nearly finished. The crop of wheat in Northern Illinois is a very heavy one. We shall send you a perfect avalanche of bread stuffs this fall. Our cool season has retarded the growth of corn. Oats and barley are very fine. Grass is nothing thought of with us. Millions of acres of the finest pasturage and hay are annually given to the flames. Our sheep are, however, gradually extinguishing those fires. You shall in a few years see our *wool* in your markets, and have the hum of the manufacturer on the banks of the Fox and the Rock rivers."

Mr. R. S. Hardwick, of Georgia, writes:—"Our crops are finer in Georgia than I have known them for several years. We have a flourishing Planters' Club in this county, and it has already done much for the improvement of agriculture and stock; but much more needs to be done. I have exerted myself very much to get my brother farmers to read agricultural works, and have succeeded with about fifty persons; which, perhaps, is the greatest good I have done, except the introduction of Berkshire hogs and Durham cattle." We shall be glad of his communication on the facts to which he alludes.

LADIES' DEPARTMENT.

For the American Agriculturist.

Gent.—It gave me pleasure to see the observations of Mr. Lewis on the utility and pleasure derivable from an occasional reference to the time-honored classics, which, as he justly hints, might well be substituted for the pernicious light reading which pours in upon us at every avenue, finding access to the quiet ingles of the country, as well as the luxurious apartments of the city. In looking over the late beautiful work of William Howitt on "the Rural Life of England," I have been interested in his corresponding notice of the truly great men of past days, who, with rarely an exception, were the lovers of the country and the cultivators of the soil. Permit me to quote a few passages, perhaps not irrelevant to your columns, which may be an acceptable *morceau* to some who cannot obtain the work itself.

"Of Cicero, Seneca, the Plinys, I will say nothing. We all know how they delighted in their country vilas and gardens. We all know how Cicero, in his Treatise on Old Age, has declared his fondness for farming, and how, between his pleadings in the Forum, he used to seek the refreshment of a walk in a grove of plane-trees. We know how, during the best ages of the commonwealth, their generals and dictators were brought from the plough and their country retreats—a fine feature in the Roman character, and one which may in part account for their so long retaining the simplicity of their tastes and that high tone of virtue which generally accompanies a daily intercourse with the Spirit of nature. All this we know; but what is still more remarkable is, that Horace and Virgil, two of the most courtly poets that ever existed, were both passionately fond of the country, and perpetually declared, in their writings, that there is nothing in the splendor and fascinations of city life to compare with the serene felicity of a rural one. Horace is perpetually rejoicing over his Sabine farm; and Virgil has, in his Georgics, described all the rural economy of the age, with a gusto that is felt in every line. His details fill us with admiration at the great resemblance of the science of these matters at that time and at this. With scarcely an exception, in all modes of rural management, in all kinds of farming stock, sheep, cattle, and horses, he would be now pronounced a consummate judge; and his rules for the culture of fields and gardens, would serve for studies here, notwithstanding the difference of the Italian and English climates." Yet, as Howitt goes on to remrak, these stern warriors and smooth-spoken bards of ancient story, were but feebly impressed with that all-pervading enthusiasm, for the wonders and beauties of divine workmanship now so generally manifested in all classes of society, which breathes in the hallowed strains of the poet's lyre, and enters deeply into the spirit of our journals and periodicals of ephemeral literature—into our books of travel and works of theology and metaphysics—and which is seen in the whole character of society and its institutions. The love of the country and its rural occupations has been for centuries a growing passion, and with what truth does Howitt ascribe *to Christianity* this change, so obvious to all reflecting minds! The soliloquy which follows this just ascription is not among the least glowing and beautiful pages of this sweet, popular poet and pastoral writer. But let us extract a passage or two from what he says on a subject which more than all others touches the liveliest chord in the Christian's breast. "Yes! the only difference between modern literature and that of the ancients, lies in our general advantage over them in this particular. It is from the literature of the Bible, and the heirship of immortality laid open in it, that we owe our enlarged conceptions of natural beauty, and our quickened affections towards the handiworks of God." "The veil which was rent asunder in the hour that its Divine Founder consummated his mission, was plucked away, not only from the heart of man, not only from the immortality of his being, but from the face of nature. A mystery and a doubt, which had hung athwart the sky like a vast and gloomy cloud, was withdrawn, and man beheld creation as the assured work of God—saw a parental hand guiding, sustaining, and embellishing it, and immediately felt himself brought into a kinship with it, and into an everlasting sympathy with all that was beautiful around him; not simply for the beauty itself, but because it was the work of the one Great Father—the one Great Fountain of all life and blessing." We could multiply extracts, but we would rather refer your readers to the work itself; and allow us to add, we earnestly hope to welcome Howitt and his congenial and accomplished "Mary," one day, to our wonderful country, so fraught with deep and intense interest to spirits like theirs, which the world's chilling influence has so little affected; but we would greet them by the hearth *stones* of our quiet homes, and at our family trysts, where the flame of friendship burns purest and brightest—and not in our ball-rooms and theatres, those great charnel houses of all true sentiment and feeling; and not until our transatlantic friends *so* meet us, as on common ground, shall the true genius of our country and the effect of our republican institutions be either understood or appreciated. Ella.

To pickle Cucumbers.—Select a sufficient quantity of the size you prefer, which, probably, cannot be done at one time. Put them in a stone pot, and pour over them a strong brine; to this add a small bit of alum, to secure the color. Let them stand a week; then exchange the brine for clear water, in which they must remain two or three days. Boil the best cider vinegar, and, when nearly cool, pour it over the cucumbers, having previously turned off the water. Prepared in this manner, with the addition of cloves, alspice, mustard, and cinnamon, boiled in the vinegar, pickles of every kind will keep for a year. In pickling cauliflower, tomatoes, and other vegetables which easily absorb the vinegar, the spiced vinegar should be added when *cold.*

Sure method of putting out the Fire of Chimneys.—The simplest method is to have always in the house a certain quantity of flour of sulphur, and, in case of catching in the flue, take a handful of it, which throw on the fire in the hearth, then stop the fire-place with a wet sheet or blanket. In a few seconds the fire will be entirely out.—*Franklin Farmer.*

If you wish to have a supply of *horse-radish* all winter, have a quantity grated while the root is in perfection, put it in bottles, fill them with vinegar, and keep them corked tight.

Inflamed Eyes.—Pour boiling water on some alder flowers, and steep them like tea. When cold, put three or four drops of laudanum into a small glass of the liquid, and apply the liquid to the eyes three or four times a day; which persevered in, they will become perfectly strong in the course of a week.

When making *Candles,* steep the wicks in lime water and saltpetre, and dry them. The flame will be clear, and the tallow will not "run."

Gapes in Chickens.—Take as much soft soap as will cover the thumb-nail, and mix it with meal dough. Give it to the chicks at any stage of the disease. If this fails on the first application, it rarely does on the second.

Woollens should be washed in very hot suds, and not rinsed. Lukewarm water shrinks them.

SELECTIONS.

RAISING CORN FOR THE MANUFACTURE OF SUGAR.—*By Wm. Webb, of Wilmington, Del.*

Use for seed the largest and best ears of any variety of corn not disposed to throw up suckers, or spread out in branches; that kind most productive in the neighborhood, will be generally the best one adapted to the purpose. The planting should be done with a drilling machine. One man with a pair of horses, and an instrument of this kind, will plant and cover, in the most perfect manner, from ten to twelve acres in a day. The rows (if practicable, let them run north and south) two and a half feet apart, and the seed dropped sufficiently thick in the row to insure a plant every two or three inches.

A large harrow made with teeth arranged so as not to injure the corn, may be used to advantage soon after it is up. The after culture is performed with a cultivator, and here will be perceived one of the great advantages of drilling; the plants all growing in lines, perfectly regular and straight with each other, the horse-hoe stirs the earth and cuts up the weeds close by every one, so that no hand-hoeing will be required in any part of the cultivation.

"It is a part of the system of cane planting in Louisiana, to raise as full a stand of cane upon the ground as possible; experience having proved that the most sugar is obtained from the land in this way." As far as my experience has gone, the same thing is true of corn. This point must therefore be attended to, and the deficiencies, if any occur, made up by timely replanting.

The next operation is taking off the ears. Many stalks will not produce any, but wherever they appear, they must be removed. It is not best to undertake the work too early; as when the ears first appear, they are tender, and cannot be taken off without breaking, which increases the trouble. Any time before the formation of grain upon them, will be soon enough.

Nothing farther is necessary to be done until the crop is ready to cut for grinding. In our latitude, (39° 43′ N.) the cutting may commence, with the earlier varieties, about the middle of August. The later kinds will be ripe in September, and continue in season until cut off by frost. The stalks should be topped and bladed while standing in the field. They are then cut, tied in bundles, and taken to the mill. The tops and blades, when properly cured, make excellent fodder, rather better, it is believed, than any hitherto used; and the residuum, after passing the rollers, may easily be dried and used in the same way; another advantage over the cane, which, after the juice is expressed, is usually burned.

The mills should be made on the same general principle employed in constructing those intended for grinding cane. An important difference, however, will be found both in the original cost, and in the expense of working them. Judging from the comparative hardness of cane and corn stalk, it is believed that one-fourth part of the strength necessary in the construction of a cane mill, will be amply sufficient for corn; and less than one-fourth part of the power will move it with the same velocity. It may be made with three upright wooden rollers, from twenty to forty inches in length, turned so as to run true, and fitted into a strong frame work, consisting of two horizontal pieces sustained by uprights. These pieces are mortised to admit wedges on each side the pivots of the two outside rollers, by which their distances from the middle one may be regulated. The power is applied to the middle roller, and the others are moved from it by means of cogs. In grinding, the stalks pass through on the right side of the middle cylinder, and come in contact with a piece of frame work called the dumb returner, which directs them backwards so that they pass through the rollers again on the opposite side of the middle one. The modern improved machine is made entirely of iron; three horizontal rollers arranged in a triangular form, one above and two below, the cane or stalk passes directly through, receiving two pressures before it escapes. The lower cylinders are contained in a small cistern which receives the juice. The latter machine is the most complete, the former the least expensive. These mills may be moved by cattle, but for large operations, steam or water power is preferable. When the vertical cylinders are turned by cattle, the axis of the middle one has long levers fixed across it, extending from ten to fifteen feet from the centre. To render the arms firm, the axis of this roller is carried up to a considerable height, and oblique braces of wood by which the oxen or horses draw, are extended from the top of the vertical axis, to the extremities of each of the arms. When horizontal cylinders are propelled by animal power, the upper roller is turned by cogs at one end, which are caught by cogs on a vertical shaft. It is said that in the West Indies, the purest cane juice will ferment in twenty minutes after it enters the receiver. Corn juice has been kept for one hour before boiling, without any apparent injury resulting; but so much delay is not desirable, as it may be attended with bad effects.

The process which has been employed in the manufacture of Maize sugar, is as follows: The juice, after coming from the mill, stood for a short time to deposite some of its coarser impurities; it was then poured off, and passed through a flannel strainer, in order to get rid of such matters as could be separated in this way. Lime water, called milk of lime, was then added in the proportion of one or two table spoon's full to the gallon. It is said by sugar manufacturers, that knowledge on this point can only be acquired by experience; but I have never failed in making sugar from employing too much or too little of the lime. A certain portion of this substance, however, is undoubtedly necessary, and more or less than this will be injurious; but no precise directions can be given about it. The juice was then placed over the fire, and brought nearly to the boiling point, when it was carefully skimmed, taking care to complete this operation before ebullition commenced. It was then boiled down rapidly, removing the scum as it rose. The juice was examined from time to time, and if there was an appearance of feculent particles which would not rise to the surface, it was again passed through a flannel strainer. In judging when the syrup was sufficiently boiled, a portion was taken between the thumb and finger, and if when moderately cool, a thread half an inch long could be drawn, it was considered to be done, and was poured into broad shallow vessels to crystalize. In some cases crystallization commenced in twelve hours; in others, not till after several days; and in no case was this process so far completed as to allow the sugar to be drained in less than three weeks from the time of boiling. The reason why so great a length of time was required, I have not yet been able to discover. There is no doubt but that an improved process of manufacture will cause it to granulate as quickly as any other.

In a manual on the subject of cane sugar, prepared a few years since, in compliance with a resolution of the House of Representatives, some improvements were suggested on the usual mode of operation, which appear equally applicable to the corn. They are at least worthy of trial. The author remarks that "Defecation is the great problem of sugar making, and that it is one of no easy solution is proved by the unsatisfactory experience of centuries. We shall venture to advance a plan relative to this subject, which is in some respects new, and is founded on the view we have taken of the chemical composition of cane liquor. The cane juice, after having been suffered, by standing, to deposit its coarser impurities, should be drawn off to a rectangular vat, having a double bottom, and whose depth is equal to its diameter; in this vessel it must be subjected to a temperature of 208 to 210° F. From this vessel, after a repose of about forty-five minutes, its clear contents are to be drawn, by an orifice placed one inch above the bottom, into a vat of similar construction, whose top is situated four inches above the bottom of the first—taking the precaution to pass the liquor, in its passage from one vat to the other, through a filter of coarse cotton bagging. What remains in the vat is then to be drawn off through an orifice, on a line with the bottom, and suffered to settle in casks, the clear portion being added eventually to the second vat. The filtered liquor, in the second receiver, is now treated with milk of lime, formed by adding perfectly impalpable slacked lime to water, in the proportion of not less than four cubic inches to a gallon, the steam being let in previous to the addition of the lime. The quantity of temper is to be regulated as follows: after the additions of temper, portions of the liquor are examined, from time to time, by passing it through a fine cloth filter, and adding to it, in a wine glass, a teaspoon full of clear lime water; so long as a cloudiness appears in the liquor, on the application of this test, more milk of lime must be added. The heat must be carried to 210° F., when the steam must be cut off, and, after a repose like that above described, it is run off by means of an orifice, one inch above the bottom, until it begins to appear cloudy, when this orifice is closed, and another, situated on a level with the bottom, is opened, and the remainder is run off into a tub or barrel to settle for future decantation. The defecated liquor is made to traverse a bagging filter, as before, on its way to a general reservoir near the grande, and which should be capable of holding one thousand gallons. Sulphuric acid, diluted with twenty times its weight of water, or tartaric acid, dissolved in ten times its weight of water, is added, from time to time, to this reservoir, in quantities sufficient to maintain its contents, as nearly as possible, in a state of neutralization, or in such a condition that there will be no alkaline reaction on paper stained with yellow by a strong decoction of turmeric.

The reasons for the foregoing plan are the following. Heat alone is sufficient for the separation of the albumen, and a large portion of the green fecula. The first heating, therefore, coagulates the albumen completely, the greater part of which will rise to the surface in a scum, more or less tenacious, bringing along with it a part of the precipitated fecula; while another portion of these impurities then falls to the bottom, along with insoluble earthy matters, pieces of cane, &c. And on being transferred to the second vat, the quantity of lime required for rendering insoluble the balance of the coloring matter in the juice, is greatly reduced, while its mischievous influence in rendering albumen soluble is avoided, since the principal part is already removed. The filters collect those flocculi which had escaped the process of subsidence; and the addition of sulphuric acid, or of tartaric acid, removes from the defecated liquor all excess of lime which it may contain, and the insoluble precipitate of sulphate of lime besides on the bottom of the general reservoir, without going forward to injure the kettles by the formation of a thick crust.

It will be at once apparent, wherein the present method of defecation has advantages over that where steam vats are employed, since by that plan a large portion of the albumen was rendered permanently soluble by the lime employed for throwing down the green fecula; and besides, no measures were taken for getting rid of the superfluous alkali remaining in solution, after the defecation was completed—the alkali being left to enter into union with the sugar, and by its subsequent action upon it in the kettles, to convert it into gum."

(*Remainder in next number.*)

Cheap Roofs.—The simple mode of roofing outhouses by nailing thin boards on light rafters may be introduced to very great advantage, particularly in the country. It is only to subject the boards, before using, to the action of fire, by way of thoroughly seasoning them. Nail them on immediately, and cover them with sheathing paper and a dressing of tar; and a covering, almost for a lifetime, may safely be calculated upon. The rafters, three inches deep, one and a half thick; the boards half an inch thick, straightened on the edges and closely nailed.

The following composition for covering such a roof was employed at Wickham twenty years ago, and is at this present time as good as when first laid. The roof is nearly flat, having a run of one inch only to the foot, the boards being securely nailed and covered with a course of sheathing paper, such as is used under the copper-sheathing of ships, made fast by small flat-headed nails. To eight gallons of common tar, add two gallons of Roman cement, five pounds of resin, and three pounds of tallow; boil and well stir the ingredients, so as thoroughly to incorporate them, and lay on the roof while hot, with a brush, spreading it very evenly; then sprinkle it while hot with sharp sifted sand, and when cold, tar and sand as before; after which, a single coat of tar once in five or six years will preserve the roof for an age.

To the above may be added, an incombustible impenetrable wash, prepared according to the following directions. Slake stone lime with hot water in a tub, covering it to keep in the steam; pass six quarts of it through a sieve, it being in the state of fine dry powder, and add to it one quart of fine salt and two gallons of water, boiling and skimming it. To every five gallons of this boiled mixture, add one pound of alum, half a pound of copperas; and by slow degrees half a pound of potash and four quarts of fine sharp sand. The mixture will now admit of any coloring matter that might be preferred, and is to be applied with a brush. It looks better than paint, and is as durable as stone. It will stop leaks in the roof, prevent the moss from growing and injuring the wood, rendering it incombustible, and, when laid upon brick-work, causing it to become impenetrable to rain or moisture.—*Farmers' Cabinet.*

Bees.—But few persons are aware how early in the season bees eat honey faster than they procure it. By not attending to this in due time, learning from experiments, observation, or the experiments of others, much is lost. When the weather is dry, bees usually consume honey faster than they collect it after the middle or 20th of July, unless they have access to buckwheat, or other suitable flowers cultivated for their use; in this case, they may gain honey in September.

We have learned the above facts from exact experiments, having weighed hives every week through the season. In a severe drought we have known bees to starve in the latter part of July, and those hives that had honey would lose as much in weight per week, as in the cold weather in winter. In common seasons, bees seldom gain any thing after the 1st of August, without the advantage for pasturage named above.

This subject is important to bee masters who follow the old system, and destroy the bees when they take the honey. Some let them remain till the latter part of September, eating honey two months after they have ceased to collect any of consequence. In our short seasons for collecting honey, and long ones for consuming it, the habits of the bees must be studied very attentively, and there must be the most useful and economical management in order to make them profitable.

To Destroy the Bee Miller.—To a pint of water sweetened with honey or sugar, add half a gill of vinegar, and set it in an open vessel on the top, or by the side of the hive. When the miller comes in the night, he will fly into the mixture and be drowned.—*Boston Far. Jour.*

To Protect Sheep from the Gad Fly.—In August and September this fly lays its eggs in the nostrils of sheep, where they are hatched, and the worms crawl into the head, and frequently they eat through to the brain. In this way many sheep are destroyed. As a protection, smirch their noses with tar. Lay some tar in a trough or on a board, and strew fine salt on it: the sheep will finish the operation. The tar will protect them, and what they eat will promote their health.—*Ib.*

Compost—A substitute for soapboilers spent Ley.—Take of fine, dry, snuffy peat 50 lbs.; salt, ½ bushel; ashes, 1 bushel; water, 100 gallons. Mix the ashes and peat well together, sprinkling with water to moisten a little; let the heap lay for a week. Dissolve the salt in the water, in a hogshead, and add to the brine the mixture of peat and ashes, stirring well the while. Let it be stirred occasionally for a week, and it will be fit for use. Apply as spent ley, grounds and all. Both ashes and salt may be doubled and trebled with advantage, if convenient. The mixture must be used before it begins to putrefy; this occurs in three weeks. It then evolves sulphuretted hydrogen gas, or the smell of gas of rotten eggs; this arises from the decomposition of the sulphates in the water and ashes, by the vegetable matter. A portion of geine is thus deposited from the solution.—*Dana.*

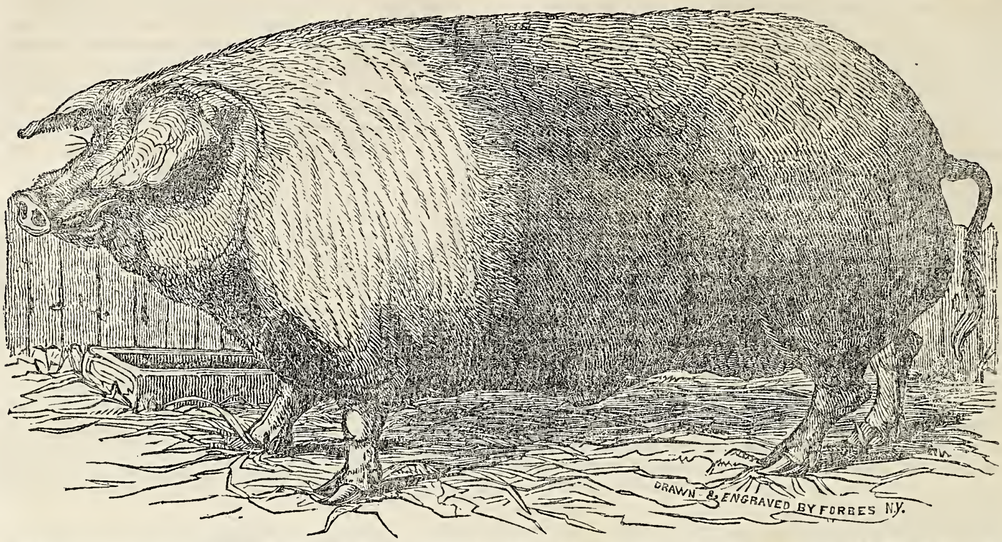
Salt, Lime, and Peat.—Take one bushel of salt, one cask of lime. Slack the lime with the brine made by dissolving the salt in water sufficient to make a stiff paste with the lime, which will not be quite sufficient to dissolve all the salt. Mix all the materials then well together in a heap for ten days, and then be well mixed with three cords of peat; shovel well over for about six weeks, and it will be fit for use. Here, then, are produced three cords of manure, for about the cost of $2 10 per cord:—Salt, $0 60; lime, $1 20; peat, $4 50—$6 30.—3)$6 30($2 10.—*Ib.*

Animal matter and peat.—There are some sources of alkali, for converting peat into soluble matter. Of these the chief is animal matter. Here we have ammonnia produced. It has been actually proved, by experiment, that a dead horse can convert twenty tons (or cubic yards) of peat into a valuable manure, richer and more lasting than stable dung;—"a barrel of alewives is equal to a load of peat." The next great and prolific source of ammonia is urine. The urine of one cow for a winter, mixed up as it is daily collected with peat, is sufficient to manure half an acre of land with twenty loads of manure of the best quality, while her solid evacuations and litter, for the same period, affords only seventeen loads, whose value is only about one half that of the former.—*Ib.*

Cooking Cotton Seed.—I have a large kettle, which holds from 5 to 6 bushels, set upon a brick furnace, (which is less than one day's work for a mason to make.) I fill my kettle with cotton-seed fresh from the gin, and then fill up the kettle with water, and boil something less than half an hour; then empty the seed into troughs, and let my cattle and hogs to them. The milk and butter has none of that cotton-seed taste which the green or uncooked seed gives. Both cattle and hogs will keep in good order, winter and summer, on seed thus prepared; and when you are ready to fatten pork, you have only to add an equal quantity of cotton seed and corn, and boil as above. Experience has proved to me that it will fatten sooner and be equally good as when fattened on corn alone. Your cows will give an abundance of milk all winter, when fed in this manner, with but one bushel of corn to four of cotton seed. Every one is aware of the advantage of boiling turnips, turnip greens and cabbage for the human stomach. The boiling of cotton seed is not less advantageous as food for stock. Besides, there is great economy in feeding seed thus prepared. By the usual method in feeding, there are more than double the quantity of seed wasted than are consumed by the stock.—*S. W. Plant.*

New kind of Hemp.—We have received from the editor of the Attakapas Gazette a sample of the hemp yielded by the okra plant, which our curious readers are invited to examine. The Gazette remarks: "We published last week an article from the Opelousas Gazette, stating that the okra bark contained a kind of hemp which might be employed to advantage by our cotton-planters, in making their own rope and cotton bagging. We have since received a sample of this new article, and were really astonished at its resemblance with genuine hemp, both as to color and strength. We have not the least doubt that it would fully answer the purpose just stated, if manufactured by persons understanding the business."—*New Orleans Bulletin.*

Cure for Grubs in Horses.—Add a pint of strong vinegar to a cubic inch of chalk; when the effervescence ceases, drench the horse with the liquid from a bottle.—*So. Plant.*


DRAWN & ENGRAVED BY FORBES N.Y.

The above cut represents a Woburn Boar, owned by Mr. Charles Starr, Jr., of Mendham, New Jersey. His description and the breed to which he belongs, was received too late for insertion, and will appear in our next. We believe his stock are traced to the original breed of England. Mr. S. adds, his price for pigs delivered in cages in New York, is $25 per pair for Woburn's, 3 months old, and $15 for crosses, on Berkshire's and China's. He has a few pairs of each now for sale.

NEW PUBLICATIONS.

Liebig's Organic Chemistry applied to Physiology and Pathology.—The suggestion, that *thought was a secretion of the brain*, is much in accordance with the popular style of physiological inquiries, of the past and present day. The investigations that have been made on this most important subject, have hitherto been conducted too much, as if their ingenious but visionary and misguided authors were probing the principles of matter alone. They have been vainly striving to seek out and define the *principle of life*, that hidden mystery, whose inscrutable essence, equally with that of its great Author, can be known only by Himself, and in their efforts, have only bewildered their own minds; like the alchymists in their idle pursuit of the principle of transmutation, or the geometricians, in their attempts at discovering the quadrature of the circle, or the mechanics, that of a perpetual motion, and the geographers, in their bootless efforts to reach the poles.

Liebig, like a truly great philosopher—the greatest of the present day he unquestionably is, on this and kindred subjects—very properly discards the chimerical hope of discovering *the principle of life*, and claims only for the legitimate objects of his philosophy, the discovery of *the laws of vitality*. With this object in view, he has gone forward and given to the world another volume, which, as we have not had time to peruse or further room to notice if we had, we must omit till our next. In the mean time we hope our readers will peruse it for themselves, and are sure they will thank us for thus promptly calling their attention to the work. It is for sale at Saxton & Miles, 205 Broadway.

Elements of Agricultural Chemistry and Geology, by Jas. F. W. Johnston. We are certain we have but to indicate the subjects above treated by Professor Johnston, to insure for it an immediate perusal by the farming public. It is a condensation from his enlarged "Lectures" on the same subject, affording the principles and practice therein contained, without the theory and reasoning on which they are based; and is suited to such as are less advanced in scientific agriculture than those for whom the larger work is intended. For sale at Saxton and Miles's, 205 Broadway.

Ure's Dictionary of the Arts.—We have received the first 14 Nos. of this valuable work, republished by D. Appleton & Co., of this city. With many of the best scientific works of the present day, we are indebted to our transatlantic brethren for the original. This affords a full and comprehensive manual on the properties of most of the substances used by mechanics and manufacturers, and the principles and practice of their most successful application, brought down to the present moment. No man of science, in the practice of the fine or useful arts, should be without it.

Final Report on the Geology of Massachusetts, by Ed. Hitchcock, L. L. D., of Amherst College, Northampton: J. H. Butler, 1841.—This is a splendid quarto of 2 volumes, containing about 1200 pages, with 50 or more pages of plates, in addition to numerous illustrations. The free-hearted donor of this most acceptable work, will accept our very sincere acknowledgments. The above work was executed in accordance with a law of the state of Massachusetts, authorising a geological survey of the state, and a report thereon, with an especial reference to its *Economical Geology*, by which is intended, the *nature of soils, their chemical composition and geological character, and means of improvement*, all of which are conspicuously treated in these volumes. By such well-timed liberality and discreet legislation, as induced the state to authorise its geological survey with particular reference to the development of its internal wealth, and especially by insisting that the report be accompanied with such scientific remarks and principles as to secure the future benefits of these discoveries, she has done much to promote the progress of future wealth and useful intelligence within her borders. These are monuments, which, like the Appian Way, will hereafter indicate to the remote and far distant future, that a generation here held sway the nineteenth century, worthy of their sires, and the country they inhabited. We need not add, for those who know him, that Prof. Hitchcock has executed this work in a manner that fully justifies the commission under which he acted.

Bees, Pigeons, Rabbits, and the Canary Bird, familiarly described; their habits, propensities and dispositions explained; mode of treatment, in health and disease, plainly laid down; and the whole adapted as a text-book for the young student. By Peter Boswell, of Greenlaw. With an appendix, for the care of several American singing birds. New York: Wiley & Putnam. —This is a reprint of a popular English Manual on the above subjects; and it is written with judgment, close attention to the habits of the pet domestics therein described, and with much plainness and good taste in the style adopted. We shall make some extracts for the *wee things*, in our Ladies' Department, which will fully illustrate the character of the work.

New Agricultural Work.—The Hon. Adam Beatty proposes publishing a work on practical agriculture, including his premium essays, which have been revised and prepared for the press, with explanatory notes. The volume will contain about 300 pages, duodecimo, on good type and paper. Price, payable when the work is delivered, $1.

From the long experience of Judge Beatty as a farmer of the West, and his high character as an agricultural writer, we have no doubt that the work he proposes publishing, will be found both valuable and interesting, and we most cordially recommend it to the public.

We have extracted the above notice from the Ky. Maysville Eagle, and we hail the determination of our highly esteemed friend, with unfeigned pleasure. We have had the satisfaction, and advantage too, of perusing the published and manuscript portions of this work, and are confident he cannot confer a greater boon on the inhabitants of *the great western valley*, than by its publication. Judge Beatty is a thoroughly practical, as well as scientific agriculturist; and his long experience, good judgment, and close and accurate observation, entitle his opinions on this subject to the fullest confidence.

The first No. of the Berkshire Farmer and Gardener's Magazine, published at Pittsfield, Wm. Bacon, editor, has been sent us. Old Berkshire, that has long been a brilliant star in the galaxy of agricultural improvement, exhibiting in her annual fairs, which have continued for many years, as fine an array of product as any other in the country, is waking up to the necessity of enlisting the press in her behalf. The paper is well filled with judicious matter, and is likely to afford an important aid in developing her agricultural resources.

We notice a long editorial article of our own, straying *uncredited* through its columns; the editor must jog the attention of the printer.

The Southern Planter of Richmond, Va., we are glad to notice, has an accession to its editorial department in that devoted friend to agriculture, L. M. Burfoot, Esq., which we are sure will give increased interest to that useful and popular work. We find another Southern Planter among our exchanges, published at Natchez, Miss., and we would respectfully suggest, whether it would not be better, to avoid confusion, that another name be adopted for one of them. It is a good title, and we don't wonder that our Southern friends are partial to it; but "a rose by another name will smell as sweet."

Old Agricultural Works.—*Barnaby Googe, Esq.* —It is amusing, as well as instructive, to look over some of the old writers on husbandry, and observe the crude and uncertain ideas and principles that possessed them; how blindly they went forward in their career as instructors and guides, and how often, instead of teachers, they show the necessity of being taught themselves. The age of superstition had not then passed away: indeed, we may ask, is it yet entirely gone? *Aye*—gone from the high places, the academies and schools, from the minds of the learned and the wise, which it not unfrequently, most fully controlled within the last two centuries and a half. Demons and unseen spirits, hovered, in their bewildered imaginations, over the walks and destinies of man, guiding his footsteps for good, or balking them for evil; the air was filled with things strange and unnatural; a prophecy of peace and good fortune breathed in the gentle zephyr, and the direst ills that flesh is heir to, grated harshly on the ear, from the foreboding north or sullen eastern blast. Nature, to them, was a riddle, an unexplained, unfathomed mystery; and, like the red man for the first time perusing a book, or an Esquimaux the incomprehensible machinery of a watch, they laid hold of her in every direction, and viewed her under every aspect; but their comprehension of her subtle laws was more darkened by the investigation than ever. Bacon had not then arisen, an angel of light and life to the weary, misdirected and bewildered traveller, in his explorations of nature's hidden labyrinths; and no mind could, with authority, prescribe where the broad line of demarcation ran, that separated truth from error. They knew that somewhere in the widened defile it lay; but the shadowy and fitful gleams of their brightest reason played so uncertain over the broad expanse, that what at one time commended itself to their minds as the clearest light of truth, was, a moment after, by some intervening cloud, passed over to the opposite side of uncertainty or error. Bacon, that landmark in the march of time, where the world pauses to contemplate the magnitude of its own inheritance when first discovered,—Bacon it was who first established the immutable and impassable lines between what was known and certain, and what was yet to be proved and determined, in the visible and tangible things of nature's operations. He taught this first and most obvious principle of action, but which, like the egg of Columbus, the world had not till then known how to adjust, to take no premises for granted, from which the unchangeable and eternal principles of truth were yet to be educed. Every step in the advancement of science was to be taken on firm, unyielding, impregnable ground. Conjecture, and the hallowed legends of monkish superstition, or the more stately and gorgeous trappings of philosophic error, were, by his giant hand, brushed from our vision, to admit the unobstructed light of truth. Henceforth and for evermore, the distinctions between the false and the real, were to be as distinctly known as day from night; and, though in the imperceptible gradations from one to the other, there is necessarily a point where neither daylight ends nor darkness begins, for which a brief space is willingly conceded, as yet doubtful and undefined, we can yet confidently say of all the rest, it has a place fixed and certain as the sun in heaven.

It is not idly or vainly claimed for the present time, that all truth is known, that even more than a few rays of light are discerned in nature's vast expanse. But what we claim for the wiser of this present generation is, that whatever they profess to know, they are absolutely certain is true; and what they assert to be false, cannot, by any efforts of sophistry, be made to assume a guise, other than that in which reason clothes it. We are not led on by the delusions of a fanciful philosophy, falsely so called, to waste our energies, our reason, and resources on things absurd and impracticable; but our course, in things natural, is as plainly marked and defined, as that in things spiritual, since the fullest developments of revelation. The *road* we are to travel is laid down with the distinctness of the milky way amid the starry host; the progress we make must depend on ourselves. If we are now blind, we are wilfully so; and if we grope in thick darkness, it is only because we prefer it to the light of day. It was the principle of Bacon, to evolve what was unknown by what was fixed and certain; to assume nothing, but to prove everything; to take no step in the dark, or on uncertain foundations; and whenever he could not advance with the certainty of holding his ground, to pause till further investigation gave him full assurance that he would not be forced to retrace his steps. To give these remarks a practical application, let us say, this is the mode every agriculturist ought to pursue in the whole course of his experiments and practice. His observation should always be awakened to what is going on around him, and nothing that can be noted should pass unobserved. From these observations should he deduce his facts; always carefully avoiding the classification of anything among the latter, but such as are beyond the possibility of overthrow or doubt. Whatever falls short of this, should remain as before, invariably ranked among the doubtful and unknown.

But we find we have occupied more space than we intended, and our illustrations from our old *black letter* friend, Barnaby Googe, Esquire, and his classic lucubrations of 400 pages, "printed at London, for John Wright, in 1578," must remain till a succeeding number.

The usual receipt of foreign monthly and quarterly journals have been received at this office, from which we shall extract hereafter.

EDITOR'S TABLE.

Directory for Fairs in 1842.

Chatauque Co. N. Y. at Westfield, Sept. 28 and 29.

Berkshire Co. Mass. at Pittsfield, Oct. 5th and 6th.

Hampshire, Franklin and Hampden Ag'l. Show, Oct. 12th and 13th—Edward Dickinson, Pres't.; Harvey Kirkland, Sec'ry.

Tennessee Ag'l. Soc.—The Annual Meeting will be held at Nashville, Oct. 11—John Shelby, Pres't.; T. Fanning, Sec'ry.

Orange Co. N. Y. Fair at Goshen, Oct. 12th.

Ourselves.—We trust we properly appreciate, and are sufficiently grateful, if we do not publicly acknowledge our indebtedness, for the many kind things said of our undertaking. We shall endeavor to render our quota of service to the farming community, by mixing the dulce with the utile, and strive so far as our feeble efforts may go, to give our farmers a taste for agricultural reading. We must beg the community, however, fully to understand, that a work of this extent cannot be carried on without means, and especially since there is measurably an end to the credit system of this country. If they wish it sustained, *they must not only subscribe themselves, but they must induce their friends to subscribe, and forward the cash for their subscriptions.* The excuse frequently offered for not taking a new agricultural paper is, that they take *one* already! Indeed? Take *one paper?* Then it is the height of audacity to suppose you should be persuaded to take another. But seriously, there is not a man in the United States who cultivates five acres of land, but would make more money by taking and *paying for three good agricultural papers*, than by the same amount laid out in any manner whatever. The short-sighted, narrow-minded, unqualified meanness that people exhibit on this subject, is sickening. If a paper is unworthy support, let it be said so, point blank, and it settles the matter so far as their judgment is concerned; but for a person to allow that a paper may be "a good one enough," that's the phrase, and yet that 384 pages per annum of large page double columns, filled with the latest and best intelligence on the very subjects they derive their whole support from, is not worth *two cents per week*, and it is even less than this, is too absurd and drivelling an excuse to offer a rational person. It is highly probable no man who cultivates 50 acres of land, but would receive, by putting the information he receives from good agricultural works into practice, more than *one dollar* per week for what costs him less than *two cents*. The color of these remarks is perhaps a little tinged by an occasional circumstance like the following, reported to us:—One of our friends having an acquaintance who had just bought a $30,000 farm for his son, and who expects to lay out half as much more before he completes his improvements, advised his taking our paper; but was repulsed with the cold calculation, that "it might not be just the thing he wanted, and he took a $1 paper already.—However, he would consider the thing—and if on further reflection—he approved of the suggestion—he did not know—but he might be induced—to take the matter into a favorable consideration." Great condescension, immaculate prudence, well considered economy! He has saved his dollar thus far, but there are ten chances to one he is losing more than his dollar every day he lives, by omitting the adoption of some improvements he would meet with, beyond the line of his reading. We can point out to any novice in farming, who has invested $30,000 in a farm, or even $10,000, at least ten paragraphs, not exceeding ten lines each, every line of which is worth at least one dollar to him, and thus far we have reached but half our volume. The above instance of *prudence* (?) is from a professional person, every way cognizant of the fitness and appropriateness of things, and from invested and professional income, enjoys a revenue of $25,000 a year. But on reflection, such a man can afford to do without our paper, *a poor man can't.*

Wheat-Sheaf Farm.—It will be noticed in our advertising columns, that this well-known farm is now for sale. We had the pleasure, recently, of looking over it, accompanied by its highly intelligent proprietor. We intend to give a detailed description of it in our next, for the purpose of illustrating to our readers the practical application of some of the most valuable principles of agriculture, which have here been successfully applied. The facility for manuring the land and rendering it susceptible of the most profitable cultivation, from the unlimited resources of the farm itself, together with the convenient and scientific arrangement of the lots, buildings, &c., render it every way a most desirable investment for the well skilled agriculturist. If Mr. S. will convey, with the title, his mode of management, and the science he has brought to bear in its cultivation, for which his well-known benevolence is an ample guarantee, we might say of it, as *executor* Johnson (the learned and pompous Dr. Samuel,) said of his deceased friend Thrale's brewery:—"We offer you, gentlemen, for sale, not a few beer tubs and brewer's vats, and the buildings to shelter them; *but the potentiality of growing rich beyond the dreams of avarice.*" The Doctor's prediction was fully verified, for the purchaser realized a princely fortune from the investment.

Cure for Warts in Horses and Cattle.—A valued friend of great experience in horses and cattle, and who has imported and bred many of the best in the U. States, says that a strong wash made of pearlash and water, applied thrice a day, will remove tumors and warts.

Remedy for corroding the Flesh by Flies and Maggots in Living Animals.—Another friend who has a valuable imported ram, on whose neck the flies have made some inroads, will be gratified to learn from the same source, that by mixing a strong decoction of elder bark with an equal quantity of spirits of turpentine, the flies will be kept off, and allow the skin to heal. A salve may be made by adding tar to the above. Paints made of white lead and linseed oil will greatly assist the healing of wounds in all animals.

New Lamp *for burning lard.*—A friend in this city says he has used a newly-constructed lamp, recently patented, in which lard is substituted for oil. The wicks are arranged as in the oil lamps, and are kept saturated with *liquid* lard, by a metallic rod, which is heated by the flame, and extends to the lard below. He represents the light as equal to that of oil, and without any sensible odor. The cost of his light he estimates at not exceeding *one third* that from oil at its present prices, reckoning the lard at 8 cents per lb. It needs little sagacity to forsee that this new article must soon usurp the place of oil entirely, and add immensely to the consumption of this important western product.

We are informed that lard is also extensively used by our woollen manufacturers, as a substitute for oil on wool, preparatory to carding and spinning. The revival of our woollen manufactories will thus furnish an immense consumption for two of our most valuable animal productions.

Copyright.—We have several times noticed our articles straying through exchange and other papers, without crediting the source from which they were derived. This is a small matter to be sure, but as we are but beginners among the editorial fraternity, we want whatever credit we are entitled to.

Dynamometer.—A writer in the S. W. Farmer, recently made some inquiries respecting this instrument, which is used to test the amount of power required to draw a plow, thus indicating the relative facility of moving two or more plows, which perform their work equally well. This is a valuable test, and ought to be in the possession of every agricultural society. We have made some inquiry for them in this city, but do not succeed in finding one. The Am. Institute procured one from Boston last season, which not proving entirely perfect, has been returned there for repair.

The Messrs. Brentnall, who advertise Berkshires in our paper, are the earliest importers of this valuable breed into the country. Ontario we saw while young, and he then gave promise of excellence, which, we understand, he has fully realized since.

The Messrs. Wait, who offer South Downs, have made several choice importations, not only of different breeds of sheep, but of other improved stock, which they personally selected in England.

Gooseberries.—Our spirited friend, Wm. J. Townsend, of Astoria, L. I., has just sent us in a *sprig*, eight inches long, which contains 14 perfect gooseberries, averaging 3 1-4 inches in circumference. They are a part of the growth from a small cutting set out last year, and transplanted this spring. He trains a single stalk about a foot high, which is then allowed to branch out like an apple tree, but he is careful to keep an open top, to admit plenty of sun and air. Around each plant he puts *a quarter of a pound of saltpetre.* If a practice is to be judged of by its fruits, we wish no better evidence of the utility of this.

The above three articles were in type for the July No. of our work, but were lost sight of by the printer till now.

☞ Saxton & Peirce, Boston, Mass., are Agents for this work.

Errata.—We correct some of the most prominent that have occurred.

No. 2, page 40—2d column, for "300 acres" read 500.
" 3, " 76—2d do. for foreign "imports," read *imposts.*
" 3, " 78—2d do. for by its "roots," read *stalks.*
" 3, " 81—2d do. after "welcome" read *toy.*
" 5, " 150—2d do. for "Philantia," read *Philautia.*
" 5, " 151—1st do. for "Sagnitia," read *Segnitia.*

Works pertaining to Agriculture for sale by Saxton & Miles, 205 Broadway.

Johnson's Elements of Agricultural Chemistry and Geology, 50 cents; Do. do. 1 vol. 12mo. $1; Gray's Botanical Text Book, $1 50; Lindley's Horticulture, $1 25; Gray's Agricultural Chemistry, 75 cents; Downing's Landscape Gardening, $3 50; do. Cottage Residences, $2 50; Leibig's Organic Chemistry, &c. &c.

Orders from any part of the United States punctually attended to, at the **cheap cash book store, 205 Broadway**

Wheat Sheaf FARM on Staten Island, for sale.

A recent domestic bereavement has induced the Undersigned to offer his residence, on Staten Island, for sale. It is situated midway of the outer bay, on the sea shore, eight miles from the quarantine Ferry, three from that of Rossville, and equi-distant from two others, Seguine's Landing and Port Richmond.

The condition of the Farm—the extent, value, and practical usefulness of the improvements and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upwards, each, including an appropriate allotment of woodland—each division offering a moderately elevated building location. The condition of the soil can at this time be best appreciated, as its harvest is heavy and now gathering. Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product. **W. A. SEELY, 218 Fulton-st. N. York.**

REVIEW OF THE MARKET.

Prices Current in New-York, Aug. 24, 1842.

ASHES, Pots, per 100 lb.	$5 50	to 5 62
Pearls, do.	5 87	5 94
BEESWAX, Yellow, per lb.	28	30
COTTON, Louisiana, do.	6	10½
Upland, do.	5¾	9
Florida, do.	5	9
Alabama, do.	6	10½
FEATHERS, American, live, per lb.	24	32
FLAX, American, per lb.	7 ½	8
FLOUR, Northern and Western, via Erie Canal, per bbl.	5 00	5 12½
do. via N. Orleans,	4 87	5 00
Southern, per bbl.	5 25	5 37
RYE, per bbl.	—	3 62
MEAL, Corn, per bbl.	3 00	3 06
do. per hhd.	13 25	13 50
WHEAT, Western, per bushel,	1 03	1 10
Southern, do.	80	95
RYE, Northern, per bushel,	60	61
CORN, do. do.	58	60
Southern, do.	54	56
BARLEY, per bushel,	60	62
OATS, Northern, per bushel,	28	31
Southern, do.	22	23
PEAS, Green, do.	91	1 12
BEANS, White, per bushel,	1 20	1 40
CLOVER SEED, per lb.	7	8
TIMOTHY SEED, per tierce of 7 bu.	15 00	16 00
FLAX SEED, rough, do. do.	10 50	11 00
clean, do. do.	12 00	12 50
RICE, per 100 lb.	2 25	2 87
HEMP, Russia, per ton,	215 00	220 00
American, do.	—	—
HOPS, first sort, per lb.	11	14
LEAD, Pig, per lb.	3¼	3½
Sheet and Bar, per lb.	4½	5
OIL, Linseed, American, per gal.	82	88
PLASTER OF PARIS, first quality, per ton,	2 25	2 75
unground do.	1 75	2 00
BEEF Mess, per bbl.	7 25	8 00
Prime, do.	2 50	3 00
Cargo, do.	2 50	2 75
PORK, Mess, do.	7 50	9 50
Prime, do.	5 00	7 50
LARD, per lb.	6½	7½
BUTTER, best Table, per lb.	16	18
Western, good, per lb.	10	11
Shipping, do.	6	7
CHEESE, in boxes and casks, per lb.	5	6½
HAMS, Smoked, per lb.	5	7½
Pickled, do.	4	4½
Shoulders, smoked	3½	4
BEEF, Smoked, do.	5¾	6½
SALT, Liverpool, ground, sack	1 20	1 25
do. fine, do.	1 45	1 55
SUGAR, New Orleans, per lb.	3½	5½
TOBACCO, Virginia, do.	2	6
Kentucky, do.	2½	6
TALLOW, American, do.	6½	8
WOOL, American Saxony fleece, per lb.	32	35
Full blood Merino do. do.	28	30
Half to three-fourths do. do.	24	26
Native to half do. do.	18	20
SHEEP PELTS, each,	20	50
HAY, new, per 100lb.	50	62
old do.	62	75
POTATOES, new, per bushel,	22	25
EGGS, per 100,	1 12	1 15

REMARKS.—Aug. 24.—The demand for FLOUR and GRAIN from abroad has fallen off, and as the new crop is coming in freely, prices have rapidly receded since our last. A much larger reduction is confidently anticipated. The grain prospects in England and throughout Europe are generally very promising, and there is little expectation of any considerable demand from that quarter; while our own crops have been so unusually good and abundant, and so large a portion of our population are producing their own food, that it is believed grain will reach a lower price in the American market than has been known for a great many years. Corn and oats are abundant and dull.

PROVISIONS, PORK, BEEF and LARD, are without much change. It continues to be shipped in small quantities. Exports from 1st to 17th Aug. 713 bbls. Beef, 3,136 bbls. Pork, and 2,920 kegs Lard.

CATTLE MARKET.—At market, 1,000 fresh Cattle; 35 Cows and Calves, and 2209 Sheep.

BEEVES.—Beef Cattle very dull, and prices barely sustained. We give the extremes as $4 a $6 per 100 lbs. for fair. 462 of the cattle came from Pennsylvania, and the residue from the north and east. 550 remained unsold, and 70 were sent to Brighton.

COWS and CALVES—All at market but 12 sold at from $20 to $38 each.

SHEEP and LAMBS—Prices of Sheep ranged from $1.50 to $4; Lambs, $1.25 to $2.75 each, according to quality.

☞ In consequence of the removal of the former publisher of this paper to England, it will hereafter be published by Messrs. SAXTON and MILES, booksellers and publishers generally, at No. 205 Broadway. All letters on business relating to the Am. Agriculturist, should be addressed, *post-paid*, to them.

SAXTON & MILES,
PUBLISHERS AND BOOKSELLERS,
205 BROADWAY—NEW YORK.
Wholesale and Retail Dealers in Standard, Theological, Classical, Agricultural, Health, Miscellaneous and School Books.

S. & M. intend keeping a full supply of all works relating to Agriculture and its improvement, and to the sciences connected therewith; and to make their store a DEPOT, where the FARMER ESPECIALLY can find any thing he may wish, whether pertaining to his business or otherwise; and also where he can send his orders for books, with the confidence that they will be promptly and faithfully attended to.

C. M. SAXTON,
E. E. MILES.

THE HEALTH ALMANAC FOR THE YEAR 1843.—*Devoted to the Law which regulates the animal, originally designed for the Spirit of Man—By a* VEGETABLE EATER.

CONTENTS.—Equinoxes and Solstices..Eclipses in the Year 1843—Calendar, with Maxims on Health, Law, Policy and Mind—Agricultural Statistics of the U. S. by Hon. H. L Elsworth—Mastication—Life—Milk—Nothing made in vain—The Stomach and Internal Canal—Worms in Living Creatures—On Swine's Flesh as food—Original Food of Man—Relation of Man and Wife—Relation of Parent and Child—Preparation of Bread Stuff—Bread Making—Head Ache—Life and Death—Formation of the Teeth—Bankrupts—Eating—Query answered—Disease and Pani—Bathing—Sleep—Dreaming—General Differences of the Sexes of the Animni and Vegetable Kingdom—Rates of Postage, &c.

Published by SAXTON & MILES, 205 Broadway—price 6 cents single copy; 37 1-2 cents per doz.; $2 50 per 100; 20 dols. per 1000

Important Sale to Agriculturists.

IMPROVED SHORT HORN DURHAM CATTLE.

On Thursday, the 8th September,

At 10 o'clock, will be sold at public sale, at the Exhibition ground of the Philadelphia Agricultural Society, Rising Sun, on the Germantown Road, 3 miles from the city, a choice selection of splendid DURHAM DAIRY STOCK, from the herd of James Gowen, Esq., of Mount Airy, consisting of imported Cows, young Bulls and Calves, from Dairy Maid, Pochontas, Victoria, etc., and by the celebrated bulls Colostra, Prince of Wales, and Leander.

This sale will afford to breeders an opportunity of adding to their stocks thorough bred animals of high character and pure blood, and their diffusion into proper hands is a primary object in this sale, together with the necessity of a separation of the herd to prevent over close breeding.

Catalogues will be ready in due time, and the cattle may be examined at the Exhibition ground two days previous to the sale.

Contents of this Number.—Editorial.

History and Traditions of Short Horn Cattle, 161
Farm of Mr. Bates—Clay Lands, 165
Improvement of Sandy Soils, 166
Reclaiming Peat Swamps, 169
Wheat, Oats, Improvements on Farms, Saxon Sheeep and Mountain Pastures, 170
D. C. Colling's S. H. Cattle and Rambouillet Sheep—Handling Stock, 171
Cultivation of the Mulberry, 172
Preservation of Grapes and Must, 174
Sheep on the Prairies, 176
Soiling Cattle—Effect of Humidity on Temperature, 177

Original Correspondence.

Paular Merinos—Domestic Poultry, 178—179
Uses of Charcoal as Manure, 180
Native Swine—Weevil Influence of the Moon, 181
Preservation of Health—Illinois Harvests, 182—183
Southern Crops—Howitt's Rural Life—Receipts, 184

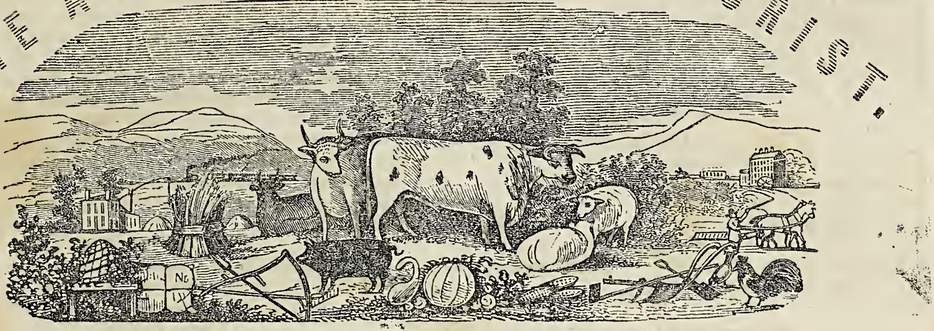
Selections.

Raising Corn for Sugar—Cheap Roof, 185—186
Bees Compost—Boiling Cotton Seed—New kind of Hemp—Cure for Grubs in Horses, 187
Cut of Woburn Boat—New Publications, 188

Editor's Table.

Directory for Fairs—Ourselves, 190
Cure for Injuries to Cattle—Lard Lamp—Dynamometer—Errata, &c. 191

THE AMERICAN AGRICULTURIST.



Agriculture is the most healthful, the most useful, and the most noble employment of Man.--*Washington.*

Vol. I. **New-York, October, 1842.** **No. 7.**

A. B. Allen, and R. L. Allen, Editors. Saxton & Miles, Publishers, 205 Broadway.

" THE AMERICAN AGRICULTURIST" will be published Monthly, each number to contain thirty two pages royal octavo.

Terms.--One Dollar per annum, payable strictly in advance.

Six Copies will be sent for $5. if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside.

Twenty five Copies will be sent for $20, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, post paid, No. 205 Broadway, New-York.

☞ **Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

PRIZES awarded at the Annual Show of the N. Y. State Agricultural Society, held at Albany, 27th, 28th, 29th of September, 1842.

Class I.—Cattle.—*Bulls of improved breeds, 3 years old and over.*

1	To E. P. Prentice, Albany, bull Nero,	$20
2	" John Johnston, Geneva, bull Royal William,	12
3	" C. N. Bement, Albany, bull Astoria,	8
4	" D. D. Campbell, bull ———	Diploma.

Class II.—*2 year old bulls.*

1	To E. P. Prentice, bull Fairfax,	$20
2	" Geo. Clark, West Springfield, bull Major,	12
3	" Geo. Vail, Troy, bull Wellington,	8
4	" John Sampson, Troy, bull ———	Diploma.

Class III.—*Yearling Bulls.*

1	To S. Van Rensselaer, Albany, bull Rockingham,	$12
2	" E. C. Delavan, Ballston Centre, bull Leopard,	8
3	" S. Van Rensselaer, bull White Prince,	5
4	" Geo. Vail, Troy, bull Meteor,	Diploma.

Class IV.—*Bull Calves.*

1	To E. P. Prentice, bull Cato,	$10
1	" N. C. Sweet, Clifton Park, bull ———	5
3	" Geo. Vail, bull ———	Diploma.
4	" J. M. Sherwood, Auburn, bull Damon,	Diploma.

All the above bulls were of the Short Horn, or improved Durham breed, with the exception of "Major," No. 2, Class 2, which was a splendid specimen of the Hereford, imported by Mr. Wm. Henry Sotham.

Class V.—*Cows of improved breeds.*

1	To J. M. Sherwood, cow Stella,	$20
2	" E. P. Prentice, cow Daisey,	12
3	" J. B. Dill, Auburn, cow Gazelle,	8
4	" J. M. Sherwood, cow Pansy,	Diploma.

Class VI.—*2 year old Heifers.*

1	To J. B. Dill, Hebe,	$12
2	" E. P. Prentice, Sally,	8
3	" " " Caroline,	5

Class VII.—*Yearling Heifers.*

1	To J. M. Sherwood, Norna,	$10
2	" E. P. Prentice, Charlotte,	5

Class VIII.—*Heifer Calves.*

1	To E. P. Prentice, Nell,	$10
2	" " " Dutchess,	5
3	" Geo. Vail, ———	Diploma.

All the above cows and heifers were Short Horns. There was a magnificent display of Hereford cows and heifers from Messrs Corning and Sotham's importation, but the committee did not feel disposed to decide the relative merits of *different breeds*, and therefore awarded three distinct additional premiums for this breed.

1	To Wm. H'y. Sotham, Hereford cow, Matchless,	$15
2	" " " " " Martha	10
3	" " " 2 year old heifer, Maria,	Dip.

There was also a beautiful Ayrshire cow and calf exhibited by Judge Van Bergen; but there being no one present to explain her pedigree, she was overlooked by the Committee as a *grade* S. Horn, they not considering themselves authorised by the terms of their appointment, to decide upon any but pure bred animals.

Class IX.—*Grade Cows.*

1	To G. W. Risley, New Hartford,	$12
2	" Jesse Buel, Albany,	9

Class X.—*Grade 2 year old Heifers.*

1	To S. S. Fowler, Greenbush,	$10
2	" L. V. V. Schuyler, Watervliet,	8

Class XI.—*Yearling grade Heifers.*

1	To C. N. Bement, Cream Pot,	$10

Class XII.—*Native Cows.*

2	To E. Chesebro, Guilderland Centre,	$8

Class XIII.—No award.

Class XIV.—*Native yearling Heifers.*

2 To L. V. V. Schuyler,	$5

Class XV.

To E. Chesebro, Dairy Cow,	Diploma.

Working Oxen.

1 To Winthrop Phelps, Chatham,	$20
2 " Benjamin Aikin, Greenbush,	12
3 " W. N. Sill, Bethlehem,	8
4 " Henry Adams, "	5
5 " J. L. Ten Eyck, "	Diploma.

Steers.—No award.

Fat Cattle.

1 To P. N. Rush, Syracuse,	$20
2 " Charles Godfrey, Geneva,	12
3 " " " "	8
4 " T. E. Jones, Utica,	Diploma.

Fat Sheep.

1 To F. M. Rotch, Butternuts, S. Down wether,	$10
2 " J. McD. McIntyre, Albany,	5
3 " " " "	Diploma.

Stallions over 4 years old.

1 To E. Long & Son, Cambridge, Eclipse,	$20
2 " " " " Sir Henry,	12
3 " D. McKinney, Menaville, Magnum,	Diploma.

A premium was given Mr. Sotham for his English black cart horse, Sampson.

Stallions, 3 years old.—No award.

Breeding Mares and Colts.—No award.

Matched Horses.

1 To Edward Brinckerhoff, Albany,	$15
2 " Robert Johnson, Florida,	10
3 " Peter F. Mesick, Ghent,	5

Boars.

1 To Wm. Salisbury, Leeds, Berkshire.	$10
2 " John Lossing, Albany, Berkshire.	8
3 " Samuel Shaw, Berlin, "	5
4 " J. B. Nott, Albany, Cheshire,	Diploma.
5 " Cha's Thornton, Watervliet, Berkshire,	do
6 " S. G. Crocker, Kinderhook, do	do
7 " C. N. Bement, Albany, do	do

Breeding Sows.

1 To T. C. Abrahams, Watervliet, Berkshire.	$10
2 " Benj. Gibson, Albany, do	8
3 " Gerrit Donaldson, Bethlehem do	5
4 " Gerrit Middleton, Albany do	Diploma.

Several Diplomas were recommended to others.

Sheep—*Long Wooled Bucks.*

1. To Thomas Dunn, Guilderland,	$10
2. " J. M'Donald McIntyre, Albany,	8
3. " E. C. Delavan, Ballston Centre,	5
4. " L. D. Clift, Somers,	Diploma

Pen of 3 Ewes,

1. To Corning & Sotham, Albany,	$10
2. " L. D. Clift, Somers,	8
3. " T. Dunn, Guilderland,	5
4. " J. McD. McIntyre, Albany,	Diploma

Middle Wooled Sheep—Bucks.

1. To J. McD. McIntyre,	$10
2. " F. M. Rotch, Butternuts,	8
3. " S. Wait, Montgomery,	5
4. " do. do.	Diploma

Pen of 3 Ewes.

1. To F. M. Rotch,	$10
2. " J. McD. McIntyre,	8
3. " S. Wait,	5
4. " C. N. Bement, Albany,	Diploma

Fine Wooled Sheep—Bucks.

1. To Chas. W. Hull, New Lebanon,	$10
2. " Henry D. Grove, Hoosick,	8
3. " John Mott, Mechanicsville,	5

Pen of 3 Ewes.

1. To Henry D. Grove,	$10
2 " do.	8
3. " C. W. Hull,	Diploma

Plows.—There was a fine assortment of superior Plows on the ground, but the Committee, after an investigation, with all the time and facilities within their reach, were not able to satisfy themselves of the respective merits of each; and they very properly concluded to postpone any further trial till the next Annual Meeting. In the mean time, they recommend that the Executive Committee increase the premium to an amount more worthy the attention of scientific mechanics. The Ag'l Soc. of Massachusetts awarded two premiums of $100 and $75; and it is believed by this liberal policy, they pushed improvement in this *most important farm implement*, further in one year than would otherwise have been done in twenty.

Threshing Machines.

1. To John A. Pitts, Albany,	$20
2. " D. G. Stafford, Syracuse,	10
3. " L. Bostwick, N. York,	Diploma

Straw Cutters.

1. To Wm. Hovey, Worcester, Mass.	$8
2. " J. Standish, Fishkill Landing,	5
3. " Botts & Burfoot, Richmond, Va.,	Diploma

Cutting Machine for Horse Power.

To R. Sinclair, Baltimore, Md., best,	Diploma

Horse Rakes.

2. To J. Downer, Castleton,	$5
3. " Lewis Stiman, Bethlehem,	Diploma

Fanning Mills.

1. To J. T. Grant & Co., Scaghticoke,	$8
2. " P. W. Dickie, Phelps,	5
3. " John R. Bullock, New Scotland,	Diploma

Harrows.

1. To Marcus Adams, Ogden,	$8
2. " Christopher Proctor, Bethlehem,	5
3. " Daniel Caley, do.	Diploma

Cultivators.

1. To Joseph H. Coons,	$8
2. " Ruggles, Nourse & Mason, Worcester, Mass.,	5
1. " Eliakim Elmer, Delta,	Diploma
" J. C. Langdon, Troy, Horse Hoe,	Diploma

Corn Crushers.

1. To Obed Hussey, Baltimore, Md.,	8
2. " R. Sinclair, Jr. do.	6
3. " Jas. Murray, do.	4
4. " Do. do. Hand Crusher,	Diploma
To T. R. Hussey, Auburn, for Harvesting Machine,	$10
" Calvin Olds, Marlboro' Vt. for Grain Sower,	Dip.
" J. A. Whitford, Saratoga Springs, Corn Sheller and Cleaner,	Diploma
" C. N. Bement, Albany, for Poultry House,	Diploma
" Henry Burden, for Horse Shoes, made by machinery,	Diploma
" Daniel Caley, Bethlehem, for his improved Probang	Premium
" W. S. Jacks, Catskill, Hay and Cotton Press,	$5
" Mr. Crowell, Lime Rock, Ct., Thermometer Churn,	Diploma
" Collins & Stone, Hartford, Ct., Cheese Press,	Dip.
" H. Clark, Petersburgh, Hoe,	Diploma

Cocoons.

1. To Miss L. Steele,	$15
2. " David Palmer, White Plains,	10
3. " A. P. Heartt, Troy,	$5
4. " David Palmer,	Diploma

Reeled Silk.

1. To David Palmer,	$15
2. " A. P. Heartt,	10
3. " D. Palmer,	5
4. " E. Marks, Navarino,	Diploma

Manufactured Silk.

2. To Prince & Vibber,	10
8. “ David Palmer,	5
4. “ Mrs. T. Backus,	Diploma

Silk Reel.

To A. B. Jones,	$10

Butter.

1. To George Cooley, Blooming Grove,	$20
2. “ Israel F. Goodwin, Westmoreland,	12
3. “ Hamilton Morrison, Montgomery,	8
4. “ B. A. Hall, New Lebanon,	5
5. “ John S. Bull, Washingtonville,	Diploma

Cheese.

1. To Ezra Cheesebro, Fleming,	$20
2. “ A. S. Fisk, Cedarville,	12
3. “ Samuel Green, Herkimer,	8
4. “ Isaac Haswell, Watervliet,	5
5. “ Thomas Burch, Little Falls,	Diploma

Fruits.

To A. J. Downing, Newburgh, greatest variety of Table Apples,	$5
“ W. P. Buel, 2d do.	3
“ A. P. Heartt, 3d do.	2
“ A. J. Downing, best 12 sorts of Apples,	3
“ Do. greatest variety Table Pears,	3
“ W. P. Buel, 2d do.	2
“ A. J. Downing, Newburgh, greatest variety of Winter Pears,	2
“ E. Holbrook, Hyde Park, best 12 Quinces,	2
“ A. P. Heartt, Troy, best 24 Plums,	2
“ Alex. Ross, Hudson, best Native Grapes,	2
“ A. T. Vanslyck, Coxsackie, best Foreign do.	2

Maple Sugar.

1. To B. Gauss, Jr. East Bloomfield,	15
2. “ Wm. E. White, Walton,	10
3. “ E. Bigelow, Sangerfield,	5
4. “ C. Hepinstall, Albany,	Diploma

Vegetables.

To V. P. Douw, Albany, Celery,	2
“ James Wilson, do. Broccoli,	2
“ William P. Buel, do. Carrots,	1
“ E. Holbrook, Beets,	1
“ J. B. Nott, Albany, Parsnips,	1
“ J. H. Cole, Hudson, Onions,	1
“ James Wilson, Cabbage,	1
“ S. Leonard, Albany, Tomatoes,	1
“ E. Holbrook, Egg Plant,	1
“ Do. Lima Beans,	1
“ J. B. Hudson, Albany, Curled Parsley,	1
Dr. H. Wendell, do. Squashes,	1
“ E. Chesebro, Guilderland, Pumpkins,	1
“ J. Townsend, Albany, Seed Corn,	1
“ J. Buel, do. Table Potatoes,	2
“ D. Payne, Bethlehem, 2d best do.	1
“ E. Holbrook, Sugar Beet,	1
“ D. Payne, Muskmelons,	1
“ James Coffee, Albany, German Greens,	1
“ Alex. Walsh, Lansingburg, 15 kinds Potatoes,	1
“ Dr. H. Wendell, Kelsean do.	1
“ Wm. Hy. Sotham, Ruta Bagas,	1
“ J. S. Paynburn, Bethlehem, Squashes,	1

Horticultural Implements.

To B. F. Smith & Co. Syracuse,	$10
“ Jordan L. Mott, N. York, Cast Iron Vase,	5

Manufacturss

To J. Pine, Pittstown, Woolen Blankets,	5
“ J. J. Viele, Hoosick, Woolen Carpets,	5
“ A. Koonz, Albany, Double Carpet Coverlid,	5
“ A. Fitch, Jr. Salem, Linen Diaper,	3
“ E. Wilson, Vernon, Hearth Rug,	3
“ A. J. Pine, Knit Woolen Stockings,	1

The Report of Premiums on Flowers and unenumerated articles were not with the Executive Committee and as we cannot keep this No. open longer, they will appear in our next.

The Show was held on the spacious enclosure at the Bull's Head, about a mile above Albany. A fine carriage way, in admirable order, one mile in length, surrounded the area devoted to the exhibition, and afforded a beautiful drive to the numberless vehicles of every description, which were filled by ladies and others, whom a laudable curiosity and the excessive brilliancy of the weather, brought out in throngs. A temporary fence within and adjoining the road was the headquarters for the whole horned tribes, and pens, conveniently arranged in long parallel lines, afforded ample room for the woolled and bristly families. The implements of husbandry were appropriately arranged in the open area, while well-protected sheds with shelves and tables, afforded every facility for the display of vegetables, roots, flowers, butter, cheese, sugar, farming tools and various articles of domestic manufacture. A large tent near the entrance was appropriated to the executive and other committees; while another near the centre contained a herd of 27 buffalos and one elk, which being the product of other states, were not entered for premiums.

The first day of the Fair was devoted to the examination of Plows and such agricultural implements as were on the ground, of which there was a good assortment. We noticed no implements of marked improvement over previous exhibitions, but in most, there was a slight advance on those before displayed. Many of the plows were beautiful specimens of mechanical work, and embody beyond any question, the best principles yet discovered. Several sub-soil plows of much merit were shown; also many specimens of cultivators were exhibited, and one of a new, and we should judge, a valuable improvement, the invention of J. C. Langdon of Troy, to which a diploma was awarded as a *horse hoe.* It consists of a wide double, flat share, with sharp edges for cutting the weeds and loosening the soil, and double upright guards on each side, to pulverise the earth, as well as prevent the hilling of the rows on either side.

A great variety of the various articles required on the farm were on the ground from several other states, especially from Massachusetts, Maryland and Virginia, and it must be confessed our southern brethren, have shown a spirited and successful competition in the improvement of our *Yankee notions.*

The second day, 28th, was the commencement of the cattle show, and a splendid show it was. It is believed, no other occasion, has ever witnessed so great and beautiful an exhibition of the improved breeds of cattle. We should judge there were nearly 200 thorough bred Short Horns on the ground; and most of them choice specimens, creditable not only to this country, but such as would be so considered even in England, the country of their origin, and where they have attained their greatest perfection. Of Herefords, there was the herd imported by Mr. Sotham and their descendants, the subject of much and deserved admiration. Only three or four specimens of Ayrshire were exhibited. Of the Devons, not a single specimen of pure bred, so far as our observation extended, was exhibited. *We will insure* a creditable representation of this branch, of the great cattle family, at the next annual show to be held in Western New York.

The grade animals were not numerous, nor did they possess that merit we have a right to expect; a deficiency which it is believed is attributable not to the want of animals, but a want of spirit in exhibiting. Of native bred cattle there was a sad deficiency. We felt ashamed of our native cattle if they are to be judged from the display there made. We believe our farmers have better, and if they have not, they should lose no time in crossing over the line to Massachusetts and Connecticut, and import some of the beautiful and valuable natives they possess in so great abundance. It will be perceived that no awards were given in some of these classes, and only the lowest premiums in others. There needs a little, yes, a *good deal* of book farming among the breeders of native animals. If another such deficiency occurs we *shall advocate raising the premiums*, and *open these classes to the Union*.

The fat cattle were superb. The large ox belonging to Mr. Rust, evidently a distant relative of the Herefords, weighs over 3500 lbs. and the pair of well matched red oxen, shown by Mr. Godfrey, were estimated to come nearly up to 6000 lbs.

In sheep, the greatest display by far was among the long wools. Numerous and beautiful specimens were shown, of the Cotswold, Lincoln and Bakewell, from our most eminent breeders of these varieties. The middle wools had some beautiful representations, among which we noticed the splendid South Down Wether imported by Mr. Rotch last season, which was afterwards slaughtered, and though not in great condition, was found to weigh, dressed with the head, 140 lbs. Mr. Grove showed several of his beautiful Saxons, though small, their intelligent owner contrives, from the weight and value of their fleece, to make them count, like guineas among coin. Of Merinos we are absolutely ashamed to speak. From the millions of this invaluable variety, New York has the credit of possessing, not one pure bred animal was on the ground; and but one we believe of their cross; the premium buck of Mr. Hull, whose blood was equally divided with the Saxon. Not only New York, but the whole Union requires to renew and reinvigorate the veins of this long tried, thoroughly approved race, so perfectly adapted by general consent, to our national wants. We have more to say about this hereafter.

The show of horses in the first class was peculiarly fine, and well meriting more premiums than they received. Of younger males, and breeding mares, the show was so deficient, that no awards were given. Several beautiful mares were shown, bnt not being *breeders*, were not considered as entitled to premiums. The match horses were numerous and some of them magnificent.

Mr. Sotham exhibited his imported 4 year old Sampson, a fine specimen of the English Black cart horse, 16 hands high, and of great substance. Mr. Edward Harris of Moorestown, New Jersey, showed his superb imported Norman horse, Diligence, 7 years old, 15½ hands, of great compactness and power, and admirably designed to improve many of the work horses of this country.

The Berkshires had it all their own way among the swine, though the animals on the ground were exclusively from the immediate neighborhood. We saw, however, some pretty specimens of the Chinas, Neapolitans, Byfields, and Cheshires. The show in this department was less numerous than it should have been, but the limited premiums are so disproportionate to the expense of bringing the competitors from a distance, that it is not likely to be much increased.

The show of cocoons, and raw and manufactured silk was very limited. The specimens were good so far as they went, but we hope for a better story for this department hereafter.

The butter and cheese were very fine, and worthy of high commendation. We noticed our Orange Co. friends there in great force, but they have set their neighbors so high a standard for so long a time, that they have now a competition which it is difficult to overcome.

The fruits were very splendid, and of every kind in season, and one's palate must be hard to please that could not find ample satisfaction in what was there displayed. The vegetables were of great variety and excellence, and would do credit to any kitchen garden; while the flowers, in all their brilliancy of hues and tasteful variety of forms, constituted a tangible rainbow, that breathed their promises of succeeding and abundant seasons to the confiding husbandman.

The articles of domestic manufacture were fewer than we hoped to see, for it is only where the efforts of the good man without, are sustained by the industry, skill, and good management of the wife within, that he can hope for that share of success he has a right to look for as the reward of his labors. The articles exhibited were, however, good of their kind, and show that American females have but to devote their attention to this subject, to achieve the highest performances.

The plowing match was well sustained, and did great credit to the various competitors, most of whom were fully entitled to some substantial token of approbation from the society. Believing as we do, this is one of the most important parts of our annual exhibitions, we would unhesitatingly advise a silver cup be awarded to every meritorious effort.

The 30th was devoted to the sale of animals, and we cannot but feel a mortification that so many valuable animals were suffered to pass under the hammer, at prices that cannot but check the spirit of enterprise on the part of breeders. It is true the times afford some excuse for the low prices offered; but there are those *who have the means*, *and who have not the stock*, that can be purchased with so much advantage to themselves, and with such meagre compensation to the breeder. We consider an annual sale at the close of the fair a highly important feature to engraft upon the exhibition, where such animals as are desired can be seen and examined at leisure, and their merits compared with numerous others of acknowledged excellence; and we trust the little success with which this plan has hitherto been attended, will not prevent our breeders from pursuing it, till it is fully and successfully established.

A meeting of the Society was held at the Capitol on the evening of the 28th, when some excellent speeches were made, as we were informed, other matters having required our attendance elsewhere. Some resolutions were introduced by Mr. Johnson of Oneida, expressing a strong desire to make *agriculture* a branch of our common school education, and incorporating it into a thorough course of literary acquirement.

America is getting strength on the subject of agriculture, and if the spirit that has brought it into such conspicuous notice for the last ten years, goes on with the accelerated force we have a right to expect from its advocates, we may look for nobler and more commanding developments on this great and leading interest, than has hitherto characterised the advancement of any science, art, or occupation, in ancient or modern times, in this country or any part of the world. A committee for the purpose of memorialising the legislature on this subject was appointed, consisting of the following gentlemen:

Rev. J. O. Choules, I. J. Brooks, Dr. J. P. Beekman, Hon. Jno. Savage, B. P. Johnson, G. I. Pompelly, Harvey Baldwin, and Jas S. Wadsworth.

The fair was terminated by an address from Gov. Seward, replete with just and patriotic views; and the society was adjourned till January 1843, when the premiums on field crops, and essays, and to artists and breeders, will be awarded.

Some of the arrangements for the exhibition gave considerable dissatisfaction, and if not obviated hereafter, may interpose serious obstacles to success. Among these, we particularly noticed the want of food and shelter for the animals, the last of which was in a great measure obviated from the general fineness of the weather. The position of many of the animals too, was peculiarly objectionable, they being scattered over an extensive range of uneven ground, and in several places with a ditch intervening between the fore and hind feet, which in their change of posture, frequently gave them an appearance of going up stairs or down, while no opportunity of seeing them in front was afforded, unless by climbing over a fence, where the committee was brought cheek by jowl with the animal; the only alternative being a retreat down a declivity of some feet, where, of course, any proper or adequate view of the animal was out of the question. The pedigrees and performances of many animals claimed to be pure bred, were not furnished in a manner satisfactory to committees. But as this is among the first attempts of a State fair, it seems uncharitable to censure where there is so much to commend, and we suspend our suggestions for the future executive committees that may hereafter be appointed.

Tour in England, No. 7.

Wood being scarce and high in England, the farm buildings are almost universally of stone or brick walls, with thatched, tiled or slated roofs. Those of an ancient date are often of large dimensions, and very singular in construction; the walls not being over 4 to 8 feet high, and the roof running up 30 to 50 feet or more, at quite a steep slope. From these, high walls and thatched sheds run off at right angles, inclosing the barn-yard on three sides, leaving it open only to the south; so that however rude and inconvenient the buildings may be, the yard is always protected from the cold wind, and thereby made a comfortable shelter for cattle; a matter, we regret to say, that is not sufficiently attended to by the American farmers in planning their buildings, and which deserves severe animadversion. The more modern construction of barns and stables in England is very complete. These are of handsome architecture, with strong walls, slated roofs, and abounding with every convenience. They are placed in the form of a quadrangle, inclosing large yards, well paved with round cobble stone, and usually hollowed in the centre. When horned cattle are not kept to eat up the straw, as fast as the grain is threshed out, it is spread in the yard for the comfort of the stock there, and to rot, and be mixed up with the manure the following spring, to be applied to hoed crops. We saw few cess-pools here, and suspect that in this respect generally, England, as yet, is far behind Flanders in the saving and application of liquid manures.

As the country does not abound in springs, and as the climate is very wet, the necessity of wells to supply their place is obviated by making ponds. These, too frequently, are situated close to the barn-yards, and receive all their wash, which is not only a great loss in swallowing up the liquid parts of the manure, but must prove, even in this cool climate, thus mixed with the drink of the stock, very prejudicial at times to its health. Yet we found many farmers so ignorant, or so obstinate in favor of the custom, as to contend that this wash even possessed *sanative* qualities. We wish the system of paving barn-yards could be introduced more generally among us than now prevails, as it gives them a neat, comfortable appearance, which makes it a pleasure rather than a disgust then to the lover of domestic animals to visit them.

Early in the spring, the manure is piled up into large heaps, when it undergoes "firing" and fermentation; this certainly causes a great loss, as the ammonia and other volatile gasses, which are its most fertilizing properties, thereby escape into the air. The object of fermenting and firing it with the farmer, is to destroy all hay and weed seeds that are accumulated in it, and thus prevent the springing up and growth of noxious vegetables among his crops. This undoubtedly makes a cleaner field, and one that requires much less hoeing, but then is not the loss sustained in the firing of the manure equivalent to the extra labor required in destroying the weeds? We often put this question when in England, not only to the practical farmer, but to scientific men, who had written much and ably on manures, yet never obtained a satisfactory answer, from the reason, we suppose, that. those with whom we came in contact, had not made it a subject of experiment. Our inference is, that where labor is dear, firing would be best; but where labor is cheap, the application of it in an unfermented state, is the most economical. When land is so cheap as it is in many parts of America, some contend that it is best to apply the unfermented manure on a naked fallow, and then as fast as the weeds get up, plow them in, and for the next year's crop they thus have a clean field and a greatly enriched soil. This, however, is doubtful, and we should be glad to see it settled by careful experiment on the different soils in various localities. By placing a layer of manure, then scattering a small quantity of gypsum upon it, with an intermixture of earth, then another layer of manure, and so on till the pile is completed, giving it a good coating of earth for the last operation, might possess all the advantages of firing, and still retain the volatile gasses that would otherwise escape and be lost.

Where the soil is heavy, not only is the barn yard paved, but the lanes leading to it are gravelled, or Macadamised, which is another great comfort that our wealthy landholders little heed, more especially at the west.

Much more attention is paid to plats of turf and flowers and shrubbery around their houses than with us, and in addition to these, every good farmer has his own extensive kitchen and fruit garden, where all things proper for them, that will grow in the open air, are produced in great perfection. The best gardens are enclosed by a high stone or brick fence, which breaks off the cold winds, and enables them to better hasten or retard the growth of fruits and vegetables. On a south exposure of the wall, a sloping bed of ten feet wide, or so, is laid up of sandy soil; this is for the early productions. On the north side a similar slope is made with a clay soil for the later ones. In this way, fruits and vegetables may be prolonged two to four months. Currants for instance, are easily kept from July to November, and strawberries from June to September; peas, beans, and other summer vegetables in the same way. With our fervid sun and drier climate, so great a difference perhaps could not be made; still we have seen fruits and vegetables in America frequently accelerated a fortnight in ripening, and kept a whole month longer than usual in great perfection by the introduction of walls around the garden.

Although it may not counterbalance the many ills engendered in consequence of it, there is, it must be confessed, one great advantage arising to England, from the possession of large estates by a wealthy and enlightened few; for they not only have the ability, but generally the will and inclination, to immediately adopt the improvements of a Tull and a Bakewell, and avail themselves of the discoveries and scientific applications of a Davy, in the cultivation of those estates and stocking them. This also elevates the condition of the tenant farmer, who comes immediately in contact with the landlord; for he must be taught at once more or less of the reasons of the improvements. But it is not necessary that we should have a privileged class to bring about the same desirable ends; what we want, is, that the different state governments should apply funds for the promotion of agricultural science, and making experiments, and in the event of failing to bring this about, state and county societies may do much; and the formation of farmers' clubs, as has partially been done already among us, in every little neighborhood and community, may effect still more. These last should have each its little library of standard books on agriculture, together with the best periodicals of the day, for general reading and distribution. They should also during the winter season meet at least one evening in a week, alternately, at each other's houses, to talk over and discuss agricultural affairs, and promote each other's welfare and improvement. Each, also, during the summer season, should be bound to make some little agricultural experiment to communicate to the society. Mind thus would stir up mind, impart and obtain knowledge, and prove of incalculable benefit to itself and our whole common country.

The greatest recent improvement that has been introduced into England, is the sub-soil and sub-turf plows; the first being equally effectual, and answering the same end, as double or trench spading, heretofore partially made use of in gardens and some few field crops; but owing to its great expense, the sub-soil plow was invented to obviate it, and most admirably has it succeeded, doing the work at one-fourth to one-sixth the cost of spading. The principal benefit derived from sub-soil plowing is, that it loosens the ground to thrice the depth of mere surface plowing, and thereby opens it to the admission of so much greater depth of air and heat, and the fertilizing effects of the atmosphere, and especially in dry weather, to the continued absorption of aqueous vapors. Besides the roots of all plants can penetrate much further when this is done, in search of food, which better enables them to resist drought, and when the soil is tolerably porous or well drained, the effect also of heavy rains.

Mr. Smith, of Dunston, Scotland, was the first to bring this plow into general notice, and he somewhat enthusiastically, though perhaps truly enough, thus describes the beneficial results.

"When land has been thoroughly drained, deeply wrought, and well manured, the most unpromising, sterile soil becomes a deep rich loam; rivalling in fertility the best natural land of the country: and from being fitted for raising only scanty crops of common oats, will bear good crops of from 32 to 48 bushels of wheat, 30 to 40 bushels of beans, 40 to 60 bushels of barley, and from 48 to 70 bushels of early oats per statute acre; besides potatoes, turnips, mangle-wurtzle and carrots, as green crops, which all good agriculturists know are the abundant producers of the best manure. It is hardly possible to estimate all the advantages of a dry and *deep* soil. Every operation in husbandry is thereby facilitated and cheapened; less seed and less manure produce a full effect; the chances of a good and early tilth for sowing are greatly increased; a matter of great importance in our precarious climate; and there can be no doubt that even the climate itself will be much improved by the general prevalence of land made dry."

Sir Edmund Stracey, in a communication to the Royal Agricultural Society, thus speaks, also, of the beneficial effects of the sub-soil plow.

"On my coming to reside on my estate at Rackheath about six years since, I found five hundred acres of heath land, composing two farms without tenants; the gorse, heather and fern shooting up in all parts. In short, the land was in such a condition, that the crops returned not the seed sown. The land was a loose loamy soil, and had been broken up by the plow to a depth not exceeding *four inches*, beneath which was a substratum (provincially called an iron pan,) so hard, that with difficulty could a pickaxe be made to enter in many places; and my bailiff, who had looked after the land for thirty-five years, told me that the lands were not worth cultivation, that all the neighboring farmers said the same thing, and that there was but one thing to be done, viz., to plant with fir and forest trees; but to this I paid little attention, as I had the year preceding allotted some parcels of ground, taken out of the adjoining lands, to some cottagers; to each cottage, about one third of an acre. The crops on all these allotments looked fine, healthy, and good, producing excellent wheat, carrots, peas, cabbages, potatoes, and other vegetables in abundance. The question then was, how was this done? On the outside cottage allotments all was barren. It could not be by the manure that had been laid on, for the cottagers had none but that which they had scraped from the roads. The magic of all this I could ascribe to nothing else but the spade; they had broken up the land eighteen inches deep. As to digging up 500 acres with the spade to the depth of eighteen inches, at an expense of 6*l*. an acre, I would not attempt it. I accordingly considered that a plow might be constructed so as to loosen the soil to the depth of eighteen inches, keeping the best soil to the depth of four inches, and near the surface, thus admitting air and moisture to the roots of the plants, and enable them to extend their spongioles in search of food; for air, moisture, and extent of pasture, are as necessary to the thriving and increase of vegetables as of animals. In this attempt I succeeded, as the result will show. I have now broken up all these 500 acres eighteen inches deep. The process was by sending a common plow, drawn by two horses, to precede, which turned over the ground to the depth of four inches; my sub-soil plow immediately followed in the furrow made, drawn by four horses, stirring and breaking the soil twelve or fourteen inches deeper, but not turning it over. Sometimes the iron pan was so hard, that the horses were set fast, and it became necessary to use the pickaxe to release them before they could proceed. After the first year, the land produced double the former crops. Many of the carrots being sixteen inches in length, and of a proportionate thickness. This amendment could have arisen solely from the deep plowing. Manure I had scarcely any, the land not producing then stover sufficient to keep any stock worth mentioning, and it was not possible to procure sufficient quantity from the town. The plow tore up by the roots all the old gorse, heather, and fern, so that the land lost all the distinctive character of heath land the first year after the deep plowing; which it had retained, notwithstanding the plowing with the common plows, for thirty-five years. Immediately after this sub-soil plowing, the crop of wheat was strong and long in the straw, and the grain close-bosomed and heavy, weighing full sixty-four pounds to the bushel. The quantity, as might be expected, not large, (about twenty-six bushels to the acre) but great in comparison to what it produced before. The millers were desirous of purchasing it, and could scarcely believe it was grown upon the heath land, as in former years my bailiff could with difficulty get a miller to look at his sample. Let this be borne in mind, that this land then had had no manure for years, was run out, and could only have been ameliorated by the admission of air and moisture by the deep plowing. This year the wheat on this land has looked most promising; the ears large and heavy, the straw long, and I expect the produce will be from 34 to 36 bushels an acre."

Here are most important improvements detailed with exactness, and it seems that these great benefits were accomplished with scarce the aid of manure, but simply by the use of the sub-soil plow, an instrument within the means of any of our own farmers, however limited they may be, for the cost of it in America is hardly half of that in England, and there can always be a uniting of teams among neighbors, for the purpose of obtaining the requisite force to move the sub-soil plow, at a sufficient depth to ensure the desired amelioration of the soil. The increase of the crops will enable the farmers to add to their stock, and this would make them an increase of manure, and they could thus go on and fertilize their soil to any reasonable depth and extent. How much better would the making of such improvements be for them, than to break up, as they so often do, all old associations; separate themselves from the land of their fathers; forsake home, kindred, and friends, and the comforts and refinements of a denser population, to seek rich lands, in a wild, distant, unknown, and unhealthy region—hundreds, or perhaps a thousand miles off. Verily it must be said of us, that we are a restless, roving, nomadic people. But there is no part of America as yet where a crowded population exists, and there is not that necessity for emigration, therefore, as in this old world; besides, other things unknown to us, bear on the people here, such as exorbitant tithes and taxes, and entailed privileges, which force many more independent families to remove than otherwise would, were the dense population of Great Britain alone considered.

We hope Sir Edmund was sufficiently mindful to reward his poor cottagers for setting him so good and profitable an example, in breaking up and fertilizing his poor heath land. As we understand from the examination frequently of what we suppose similar land, his sub-soil was gravelly and sufficiently porous to take in all superabundant water; with Mr. Smith the case is the reverse; his soil is a stiff clay, and without thorough draining, the expense of sub-soil plowing would have been entirely thrown away, as it would only make a deeper bed to hold the accumulating waters of the extraordinary wet climate of Great Britain.

Sir Edmund Stracey made use of another instrument somewhat similar, on his permanent grass land, called the sub-turf plow.—"It is used," he says, "to loosen the turf about ten and a half inches deep below the surface, without turning over the flag; loosening the soil underneath, consequently admitting the air and the rain, and permitting the roots of the herbage to spread in search of food. There are no marks left by which it can be known that the land has been so plowed, except from the straight lines of the coulter, at the distance of about 14 inches one from another. In about three months from the time of plowing, these lines are totally obliterated, and the quantity of aftermath, and the thickness of the bottom, have been the subject of admiration of all my neighbors. Another advantage from this sub-turf plowing is, that before that took place, water was lying stagnant in many parts after heavy rains, especially in the lower grounds to a great depth; now no water is to be seen lying on any part, the whole being absorbed by the earth."

In addition to the beneficial effects of the sub-soil plow for grass, grain, and long roots, we saw equally good effects produced from its introduction in the preparation of the soil for turnips, and we cannot but think that sub-soil plowing in our own country would be a complete preventive to winter killing wheat, for when the land was thus prepared, the roots of the grain would penetrate so deeply into the earth that the freezings and thawings of early spring could not affect them, especially if the wheat was sowed as early as the first week in September for the latitude of New York, and plowed in about three inches deep, and the ground left in its rough state without harrowing or rolling.

Note.—Since the foregoing was sent to press, we have received the English Agricultural Journals for August, and find in the London Farmer's Magazine, the report of a lecture by Mr. Smith, of Deanston, on Thorough Draining and Sub-soil Plowing, before the Royal Agricultural Society, at its annual meeting in July, at Bristol, further elucidating the subject alluded to in our letter, and bringing another year's experience and practice in his improvements. We have marked several passages of this admirable lecture for insertion in our November number, and again call the attention of our readers to the subject. They will find an engraving of a cheap and simply constructed sub-soil plow on page 28 of the April No. of this periodical, and for the best experiment detailed us of sub-soil plowing and cultivating grain, grass, or root crops, in America, we offer the premium of five year's subscription of the American Agriculturist; for the second best, three years; and for the third, one year's subscription.

Practical Farming—Wheatsheaf Farm.

In a brief visit we recently made to the farm of W. A. Seeley, Esq., of Staten Island, we noticed much worthy of imitation that is not in general use; and as we deem a detail in the practice of such improvements as we desire to inculcate, the most pleasing, intelligible, and effectual mode of making them understood, and commending to general acceptance, we think we cannot better occupy the attention of our readers for a few moments, than by laying before them some of the operations of one of the best practical and theoretical agriculturists of the present day. The farm of Mr. S. consists of about two hundred acres, of considerable diversity of soil, from a sandy beach, through almost every variety of light gravelly loam, to the stiffest clay. The eastern side is bounded by a bay, which is connected with the Atlantic, and it rises gradually from the beach to a moderate elevation in the rear, of from 60 to 75 feet. Most of the land is undulating, affording several natural ponds, which have, like similar depressions in much of the land at the east, been the depository of *peat* for ages. These ponds have been drained by surface and under drains, many of the latter requiring to pass 15 feet or more under the surrounding knolls, to afford a perfect outlet to the whole surface water. A small part of the land was under cultivation when Mr. S. purchased it a few years since, and even that small portion afforded but a scanty subsistance to its thriftless owner. How many such farmers have we in the starving occupancy of lands that contain hidden mines of wealth? A large cedar common that had never been considered worth enclosing, now yields some of the most luxuriant crops, after furnishing a large supply of posts and rails from the tops, and a stock of fuel from its roots. Much additional land has been cleared and brought into profitable cultivation, and the portions of it before tilled, have been made to quadruple their previous crops. The operations of every department are reduced to the utmost simplicity, and are everywhere conducted with great efficiency, economy, and success. The crops are of the ordinary kinds raised by our farmers generally, which renders the example furnished to some of his less skilful neighbors, the more valuable. Roots and corn; rye, barley, or wheat, and grass, follow each other in such rotation and at such intervals, as the condition of the land and the demands of the market require; but as the farm is wrought entirely by laborers at wages, it is deemed expedient to keep as large a portion in grass as possible, hay usually being worth in this market, $15 to $20 per ton, and the land yielding about two tons per acre, which is secured at a small expense, the income, it will be readily seen, is very large in proportion to the labor expended. A large vegetable garden with every variety of esculents, cultivated in great luxuriance, with a fruitery and orchard, complete the arrangements of the productive acres.

A considerable portion of the farm, however, is yet in its original forest, and we there saw clusters of white-oaks, of a length and diameter of stem that would not discredit our magnificent, western woods. The buildings are in a style of entire plainness and simplicity, yet with perfect adaptation to the object in view. A large and well constructed windmill, of the most substantial kind, occupies one of the group of farm-buildings, which is used during a great part of the year in grinding for this and the neighboring farms. But the peculiar merits of the outbuildings consists in the barns. There are two of them, of large size, and so constructed, as to afford the greatest quantity of available room. They are both built upon a side hill, thus enabling the loaded hay and grain to be drawn in upon a level with the upper side, and the entire floor is appropriated to their occupancy, while at the same time that it affords a great abundance of convenient room, saves the trouble of pitching it high, and furnishes the fodder just where it is wanted to feed into the racks for the stock below. The underground room of one is divided into stalls for horses on either side through its entire range, 130 feet, and a large gangway, accessible by folding doors at each end, runs through the centre, affording ample room for carts or wagons for the purpose of removing the manure. Water is admitted at one end through a stop-cock from a pond above, forming a reservoir from the drains. Commodious yards adjoining, afford space for exercising the animals. This barn is expressly designed for stabling supernumerary horses from this city through the winter, yet its construction admits of its being used to equal advantage for any other stock. The other barn being designed for cattle and sheep, is open on the south, and the other three sides are occupied with racks for the stock, which are divided, when necessary, by partitions and enclosures. Two other barns we have recently seen, possess nearly equal advantages; one belonging to Judge Huntington, of Hartford, placed on a side hill with one range of stalls for feeding on the weather side, and a range of cellars on the wall side, convenient for the reception of roots, which can be emptied from the carts above, and are there just where wanted for the stock, and are never liable to freezing; the other lately built by Mr. Justice Harwood of the Shaker family, at Watervliet, furnishing two under stories from the natural declivity of the ground, and an additional one by the winding ascent of a road, and an acclivity of a few feet to the centre of the building on the floor within the building, forming an access for a heavy load, that nothing but their powerful and well disciplined teams could ever encounter with success.

But the particular advantage of the first-mentioned barns, consists in the admirable contrivance afforded for the accumulation and economical preservation of the manure. Under shelter from the washing rains and exhausting sun, well mixed with earthy and vegetable matter, it is here retained till it can be advantageously applied to the land. Between and contiguous to the barns, is a tank capable of holding twenty-five thousand gallons, which is the receptacle of those enriching liquids of the farm-yard, without the retention and careful application of which, to the growing crops or stercorated heap, no farming arrangements can be deemed complete. An outlet near the top conducts off the surplus liquid to a heap of compost if it rises too high before required for use, by which it is absorbed. At all other times the cistern is emptied by sheetiron buckets attached to a revolving iron chain, and propelled either by the windmill, or if necessary, by horse-power, the shaft geering into either as required.

The great excellence of the management of this farm, we conceive to be, in the judicious arrangement and thorough application of every means for increasing the stock of manure; and for the accomplishment of this object, there is a combination of peculiar natural advantages, controlled and directed with much skill, and admirable science on the part of the enlightened proprietor. A principle in constant exercise with regard to the land itself, is one we have before earnestly enjoined, viz.: that it should be constantly working for its own or its proprietor's advantage. When not occupied by a remunerating crop, it is employed in producing something for its own benefit, and whatever is thus produced, is turned in for the support of future crops. The animal and vegetable manures, both liquid and solid, we have before seen, are husbanded and applied with the greatest care. There are yet three other sources of fertilization of limited diffusion among farmers, though greatly abounding here; the peat and muck beds before referred to; the sea-weed which is driven on to the shore in great quantities, charged with salts and vegetable matter; and the moss bankers, alewives, or bony fish, that are caught in the greatest abundance in May, June, and July. The sea-weed is hauled up to the yards and stored for the double purpose of affording beds for the cattle, absorbing the liquid manure, and adding to the compost heap. A combination of the peat and fish which are mutually corrective of each other, forms the most fertilizing material for the soil.

Peat, it is well known, consists of decayed vegetable matter, which in portions of Europe, and especially the islands of Great Britain and Ireland, is found in great extent and purity, often reaching to the depth of 5 to 40 feet, and it is there extensively used for fuel. In the cultivated parts of this country, however, it is generally mixed with a considerable quantity of earth, and is seldom adapted to any other object, than the reproduction of vegetable life. The organic matter of which it is composed, is principally the bark of the larger vegetable products, with various species of the mosses and lichens, and especially the sphagnum, a prolific, bog-producing water plant, which grows and matures on the surface of the swamps, and then falls to the bottom, to add to the accumulating mass. But though abounding in fertilizing materials, it will not yield them in its natural condition.

It is saturated with tannic acid, which constitutes the antiseptic or preservative principle, that has suspended the natural tendency to vegetable decay for ages, and which would still continue to hold it unchanged but for the labors of the husbandman.

The first operation is effectually to drain off all the water; then, if required for manure, to throw it up from its native bed and place it wherever required for the compost heap. An exposure of some weeks or months, according to the season, is required, to dry it thoroughly and allow of the beneficial action of the atmosphere. It is then mixed in alternate layers, with one-third or a less proportion of manure, or with ashes, or its equivalent, a solution of potash; or what is perhaps more valuable and more economical, when to be had at all, than either of the foregoing, animal matter of any kind, a dead horse having been found to convert 20 loads of peat into the finest quality of manure. The material used by Mr. S. for correcting the acidifying principle of the peat and rendering it every way adapted to the object in view, is the fish before alluded to, which are taken in unlimited quantities early in the season, and are of no value for any other purpose. These are hauled up to the peat beds and are there mixed in layers of about 3 inches of fish to 9 inches of peat, the pile when complete, to be covered with 2 to 4 feet of peat, which absorbs all the enriching and volatile matter of the decaying fish, which might otherwise escape.

We have in this process, a combination of advantages. Fish have for a long time been extensively used along the sea coast, as manure, but the application is made directly to the land, being scattered broadcast over the ground and plowed in when a crop of the smaller grains are required, or put in hills or dibbled in when corn or roots are cultivated. When applied in this way it affords efficient manure for a single season, but the rapid tendency to decay, and extreme volatilization of the gases it generates, allows a large portion of the nutritive matter to escape, and taints the air for a great distance with its putrid odors. This is a *compound error* which is entirely obviated by the use of peat, which is in that condition precisely in which it is best fitted to absorb the volatilised animal matter,and this it does most effectually as fast as generated. The absorption is complete, for not a particle of putrescent effluvia is detected by the most sensitive olfactories. A strong acid smell is perceptible,which arises from the expulsion, or rather liberation of the acetic principle from the vegetable matter with which it has ever before been in combination, owing to the stronger affinity it has for the gases generated by the decaying fish. The observing farmer will here note the strongly contrasted results of the combination of two materials under different circumstances. Animal matter in contact with the material affording tannic acid, or immersed in the liquid which is saturated with it, is most effectually preserved; but when freed from this, it is the most efficient agent in effecting its dissolution. Hence this matter which has existed unchanged for centuries, when placed under favorable circumstances, not only exhibits a tendency to rapid decay, but becomes a powerful means under the direction of science, in effecting the dissolution of other matter.

After remaining in the heap a few months decomposition is completed, and it may remain without injury or waste till wanted. Two or three weeks before using, it should be broken up and intimately mixed by commencing at one end, and overhauling the entire mass, when another fermentation commences, and the mass becomes rapidly heated to 90° or more, and it is then fitted for use, and may be applied immediately to the land.

But independent of these exhaustless sources of fertility, no particle of animal or vegetable manure produced upon the farm, is allowed to be wasted. All is preserved and added to the general stock of compost. The necessity of resorting to the city for manure at a large expense, is here shown to be unnecessary, and those who at first jeered at this undertaking, are now wisely following the example. Since the full organization of the farm, there has never been less than 2000 loads of surplus manure ready for use.

A small patch of the stiffest and most unpromising clay, from which, Mr. S. says his first attempt for a crop of buckwheat, resulted in a growth of about six inches; by an addition of a coating of sand plowed in, and a subsequent one harrowed over the surface, produced a most bountiful yield. It is thus the intelligent and observing *book-farmer* avails himself of all the principles of science and the experience of others, in his practise, and the consequence is, he gets rich, while his equally industrious and economical, but ignorant neighbor continues poor.

It has been suggested to use this farm as a site for an agricultural school, and it must be confessed, no more appropriate place could be selected for such a praiseworthy object. It is accessible from every portion of the Eastern United States; and the diversity of its soil, and the convenience for procuring every kind of marine and inland manures, would admit of almost every variety of experiment. The scenery, too, would not be without its beneficial effect on the yet unformed and expanding mind. The happy commingling of hill and dale; of forest and cultivated fields; of extensive meadows, and the chequered patches of almost every species of grains, roots, and vegetables, would afford a useful and delightful study to the enquiring student.

From the summit of the hill on the eastern extremity of the island near the site of the Pavilion, the eye ranges southward over this highland, which falls off gracefully on either side to the cultivated vales below. A thread of silver marks out the channel that separates it from the opposite shore on the right. Near by, on the long, low, level margin of the water, a few scattered hamlets indicate the ancient settlement of Communipaw, where the first Dutch burghers that emigrated to the new world, hoped to found a commercial capital, that in after ages was to eclipse their favorite Amsterdam at home. Still further on is the little peninsula, jutting into the bay, now known by the ambitious cognomen of Jersey City. Then comes the more elevated and picturesque promontory of Hoboken and the Elysian fields, which fancy paints yet more delightful than the charming reality, because invisible. Behind it, Weehawken lifts its poetic brow; and far beyond, where the eye begins to mingle the misty things of physical existence, with the vivid pencillings of the imagination, the

Kloster Bergs or Palisadoes rear their lofty heads of eternal rock. The bold river from the North, through which the ardent and adventurous Hudson vainly hoped to penetrate the Pacific, but which already bears on its majestic breast, as rich a freight as if it connected distant oceans, bounds on the eastern shore, the ancient and lovely island of Mannahatta. The vigorous metropolis of a youthful, giant empire, with its undefined and countless forms of architectural beauty, utility and strength; and its mazy forests of masts, stretch along on either side as far as the eye can reach; while the intervening bay, studded with the winged messengers of the deep, affords a richness, variety and magnificence of grouping, the world can no where rival. The East River, the highway to the busy land of the pilgrims, is skirted by the Wallabout and Brooklyn Heights; and yet nearer, lies the broad avenue that leads to the boundless Atlantic and the wide world beyond; while at your feet, New-Brighton and the Quarantine repose in graceful beauty, like twin swans upon the dimpling waters.

Wheat Sheaf Farm, though not as elevated and nearly seven miles to the south-west, enjoys a delightful prospect. The low line of Sandy Hook, the hills of the Nevisink, and the inlets to the towns of Shrewsbury and Middletown, lie remotely, but in full view to the south. The east looks over a small sandy peninsula, that hems in a mimic bay, to Coney Island and Rockaway, and the illimitable ocean beyond. To the left the vision extends over well-cultivated fields, and picturesque scenes of beautiful villas and quiet, tasteful country houses, till it rests on the bold summit which is surmounted by the dilapidated fortress, known as Fort Tompkins.

'Twas amid such scenery of abrupt mountains and deepened glens, on the rugged soil of the sea-girt isles and promontories, the hardy, enterprising, bold, and indomitable Greeks were reared; and no fitter place could be selected as the early home of the youthful student of American Agriculture.

Raising Silk.

Morus Multicaulis.—It has been suggested that our remarks on the Morus Multicaulis, in our last, may be subject to some misconstruction, and to prevent any injury to the silk cause, the prospect and success of which, we have most sincerely at heart; the excitement of any ill feelings; or the provoking of any controversy, which we shall not be led into under any circumstances; we shall here on the threshhold, define our position, as the politicians say. That the Multicaulis is capable of yielding the materials for a very good silk, and in great profusion, we do not deny. There is too much evidence in this country, of the fact, to dispute it. But that it is the *best adapted* to the production of silk, we have, what we consider, sufficient evidence to the contrary, to be willing to admit. In one of the most extensive silk producing districts of this country, where the latest and best information on this subject is always to be had, it is not used at all, or only when a deficiency exists of other kinds. In different and remote latitudes and longitudes throughout the states, the intelligence is frequently reported to us, that their crop of worms have nearly all died off. To the enquiry, what leaves were used, *the reply invariably is the Multicaulis.* We have heard of no similar mortality where equal skill, care, and intelligence have been used, in feeding the varieties of the white mulberry. Charles D. Bouchet, from Lyons, in France, whose ample experience and success in this country, is attested by the award of the gold medal from the American Institute in 1836, for the superior quality of his silk, says, "the leaf of the white mulberry growing in elevated, cool, and dry places, and in a light soil, yields abundant, strong, and nice silk, of a good quality. Our best authors and practical men, who have written on the subject, as the result of chimical analysis and numerous trials with the worm, find the leaf of the large-leafed mulberry, (the Multicaulis,) furnishes the least nutrition: and the broad, thick, deep green leaf has little silky matter."

The intelligent native of China, who accompanied Dr. Parker from that country, through several of the states this season, was repeatedly asked as to the use of the Multicaulis for making silk in his own country, and his reply uniformly was, that it was well known there, but not used for this purpose; and such, so far as we are informed on the subject, is the general testimony of those who have traveled in that region. Yet all this we regard but little to the purpose, except as withdrawing so much from the alleged example of China, as affords an argument for its use, as we consider experience in this country as the only guide worth following.

Here stands the evidence on one side. For the opposite, we have no doubt 1,000 respectable witnesses can be arrayed to pronounce the Multicaulis well adapted to making silk. We admit this united testimony, but still deny the untenableness of our position, that it is not the *best adapted* to making silk. The experience of intelligent, close-observing, practical men on this subject, is the only testimony we are willing to admit, and whenever such is offered us, continued through a series of years, in feeding simultaneously, the Multicaulis and the white, which have been grown on the same soil, and under the same circumstances, and fed during the whole time to different lots of worms, of the same kind and similarly situated; we shall be happy to publish it, but till then we must be permitted to adhere to our expressed opinions.

We make no insinuations as to the motives of those who have labored for the diffusion of the Multicaulis; no such detestable narrow-mindedness which is too much the fashion of the present day, induces us to throw a general suspicion over the *motives* of others, for though we believe the merest mercenary views have actuated many in this traffic, and the desire of money-making in their production and sale, may, innocently enough, have actuated all; yet we think the majority of those who have been, and still are, engaged in disseminating them, have been influenced by laudable and by the most patriotic motives, and such will be the most ready, when a doubt is suggested as to the correctness of their position, to examine fully the grounds on which their ideas have been founded.

There is much in the large, thick, luscious looking leaf, and the thrifty, prolific growth, to commend it to a favorable reception; but utility is our object, and if we find by experience, that there is an excess of moisture, which is peculiarly productive of disease to the worm, and a disproportionate deficiency of the resinous matter, which is essential to making silk, we ought not to hesitate in substituting for the fashionable Multicaulis, the large-leafed varieties of the white, such as the Alpine, Canton, and Asiatic. We repeat here what we before said, that when the Multicaulis is used at all, they should be planted on a dry, light soil, which will do much to reduce the proportion of water, and increase that of the resinous matter of the leaf. We have now done with this part of the subject, till we have such evidence of the incorrectness of our views as we have specified above, and such, if it is ever afforded us, we shall be most happy to lay before our readers. If we know our motives in this, and all other subjects pertaining to our journal, truth, and the best good of our common country, is the only rule of our action.

VARIETIES OF WORMS.—The best variety of these, beyond all question, is such as produce the *Pea-nut Cocoon*. These are of two colors, white, and salmon or straw color, but alike as to value. They are of moderate size, and round and blunt at each end, and indented in the middle, and very similar in shape to the pea-nut. The cocoons are not as large as some others, but exceeds every known kind in compactness, and the strength and fineness of the fibre, and the worms are peculiarly healthy and hardy to rear, and the cocoons are reeled with more ease than from any other kinds. Next to these in point of value is the Sulphur, and last of all the Mammoth White, and the Two-crop variety. The comparative average of yield of silk from each, is 20 ounces from a bushel of the Pea-nut; 16 from the Sulphur, and 12 to 14 from the White.

PRESERVATION OF THE EGGS.—After the eggs are laid on paper or muslin, and hung up for a few days, till properly dry, they should be carefully packed away in some cool, dry place. It is not necessary to resort to artificial cold for preserving them, unless it is required to delay their hatching beyond the ordinary time for the appearance of the leaf in the following spring. When this is desired, they must be kept uniformly cold through the winter and spring, till wanted; the temperature not being allowed to exceed 45° or 50° Far. till required for hatching. As but a brief space of warm weather suffices to start the germinating principle in the egg, which a subsequent cold below 50° cannot prevent from progressing, it is absolutely necessary, if required to retard the eggs for successive crops through the summer, that they be packed away in time to secure this object.

A good refrigerator for this purpose, is a small box to contain the eggs, lightly nailed, so as not to prevent some access by the air, for packing in an air tight box for any considerable length of time, kills them. This is to be placed in a larger box, and completely enveloped in dry, powdered charcoal, dry saw-dust; or even fine tan-bark; having 4 to 8 inches on each side of the inner box, and the outside, to be loosely secured by nails. If this is put down when the temperature is below 32°, and safely stowed away in a dry, deep, cool cellar, where there is scarcely any circulation of air, the eggs will probably keep through the whole of the following summer. But if once opened, it must be remembered, the temperature will rise and remain in the box at the elevation in the room where opened. An ice-house would be an appropriate place for exposing them, though dampness from this should be most rigidly guarded against. A niche made in the wall of a deep well, to be secured against dripping on the box, will also preserve them till wanted. Exposure below the freezing point does not injure the eggs.

HATCHING.—When sure of an adequate supply of food, the eggs may be exposed to an elevated temperature, say, at first, of 63° Far., to be *gradually* augmented to 75° or 80°. From 7 to 10 days is sufficient for hatching the eggs. They should never be removed from the paper or cloth on which they are deposited, as the adhesion of the egg to the paper, enables the young worm to disengage itself more easily when hatched. A few tender leaves should be placed around the edge of the paper, for the young things to commence their labors on, and when once attached, they should be removed immediately to the feeding room. It is generally the case that a few straggling worms only hatch the first day, and when a large quantity are to be kept, these are thrown away, and those hatched on each successive day are put on shelves by themselves, so as to go through the moulting and winding at the same time; and if only a few are left after the foutrh day, they are thrown away like the first, as not worth the trouble of tending. The cocoonery or feeding room may be a chamber or garret, or any room in the house, sheds, barns, or out-buildings; though all these are objectionable, from their liability to inconveniences, which the observing person will notice in the rules that will follow. If built expressly for this purpose, it may be any shape according to the fancy of the owner. We give a brief description of two; the first on a large scale from Mr. Whitmarsh; the second from Mr. G. B. Smith, of Baltimore; the intelligence and labors of both of whom in the silk cause, entitle them to grateful commendation.

"A cheap rough building will answer, but it should be convenient and planned with reference to *ventilation.* I have one two hundred feet long by twenty-six feet wide and two stories high, which will accommodate two millions of worms. It is set on brick pillars of three feet high, except the ends, which have cellars for the leaves, and a furnace. In the floor under each frame, a board is sawed out, eighteen inches by twelve, with a strip of board for a handle. These are easily removed. The point of the roof is raised about eight inches,—making a projection of three feet, and has the appearance of a double roof. Lids are hung with leather hinges every three feet, to be opened and shut by cords. The holes in the floor being open, and those in the roof—a free circulation goes on, aided by another row of holes about midway, or even with the second floor. These are made by pressing off a board about three inches from the side. Let this space be closed with lids, which by means of buttons underneath, may be raised in a moment.

I have said that it was two stories—it is so, as far as two rows of windows make it so. The rafters are laid across for a second floor, but they are only boarded, six feet wide in the centre, and three feet at the sides, making a walk, or gallery for coming at the frames, *which must never touch the side walls.* The object of this arrangement is to have as much room as possible under one roof. A lower room is apt to contract dampness. Uprights are made of slit-work, three inches square, and as the frames are three by six feet, the uprights are six by six feet apart, with slats nailed across, and accommodate two rows of frames drawing out each way.

I have used netting, and have all my frames fitted with it; *but I do not now use it.* Netting is convenient when the worms are to be thinned out or spread on clean frames. Lay a netted frame over the worms, on which spread leaves. A sufficient number will ascend to remove to another place. The net should lay flat on the shelf. Beyond the above purpose, netting is of no use whatever. As the worms *will not all* go up when you would change them, you must gather the remainder by hand, as you would blackberries. They should never be touched by the hand if it can be avoided. The same frame, with millinet or grass cloth, drawn on at the corners, is better, and may be taken off and washed and put away for another season. Frames covered with cloth are lighter than boards and quite as cheap, and the open spaces of the cloth admit the air to the litter beneath and prevent its gathering dampness.

I have mounting frames, but were I to erect another cocoonery, I would use straw in preference. A large cocoonery requires a large number, instead of which straw may well be used.

In so large a building there should be a partition across the centre, making the rooms one hundred feet long. A room twenty-six by twenty feet should be finished off under the roof for a hatching room, for the first week's feeding, and for millers, and should be lathed and plastered. In the cellar under each end is a furnace for hot air, made by enclosing a common box stove in a brick chamber, six inches larger than the stove, with spaces at the bottom for the admission of cold air, which is admitted into the room above by a hole in the floor of two feet square. A thermometer will be useful to indicate the changes. A plate of common salt will detect *dampness*, and one of chloride of lime will correct bad air or smell in the cocoonery. If properly cleaned it will smell of nothing but the wholesome mulberry leaves. You must not mention *Tobacco* in the presence of silk worms. In regard to this drug they show good taste; *they had rather die than smell it.*

Mr. Smith's plan is as follows:—

"Any common room may be used for the cocoonery. It ought, however, to have one or more windows on each side, and if it have a fire-place, it will be all the better for it. The second story of the house will be better for the worms than the first, though it is not so convenient for the attendants. If it be desired to fit up temporarily for the cocoonery, the following plan will answer every purpose, without the least injury to the walls, or any thing else; and after the cocoons are gathered, the shelves can be removed, and the lumber used for other purposes.

Suppose the room to be 20 feet long, and 16 feet wide. Make three trestles, such as carpenters use, out of scantling, 3 feet long, one foot high, with four legs. Set one in the middle, and one near each end of one side of the room, and lay upon them 3 plank, 16 feet long and 3 feet wide. A tin pan can be placed under each foot of the trestles, to be kept full of water to prevent ants and other vermin from getting upon the shelves. They can be obtained very cheaply at every tin-shop, and are effectual preventives of such evils. A second shelf may be placed upon the first, by fixing the trestles directly over those below, and a third, fourth, fifth and sixth in the same way. The trestles should be made to stand firmly and level, with the legs expanded, that they may act as braces to steady the range of shelves. The plank need not be nailed down, if it be an object not to injure them; but the shelves would be more steady and firm if this were done. In setting up these shelves, a space ought to be left between them and the wall, to prevent ants, &c. getting upon them from that quarter; a few inches will be sufficient. In a room of the above dimensions then, we shall have three ranges of shelves, 16 feet long, 3 feet wide, with an alley of 3 feet between each range, &c. and a space at each end, to pass freely.

If we put 6 shelves in each range, we shall have 18 shelves, 16 by 3 feet each, and these will contain 48,000 worms. The plank shelves should be covered with old newspapers or any other waste paper."

Cocoonery Statistics.—We here condense a lot of small though useful matters. Mr. S. estimates that "a worm consumes on an average one ounce of leaves during its life. The space of shelf occupied by the worms, is as follows:

During the 1st age, 1,000 worms occupy one-third of a square foot; 2d age, three-fourths do.; 3d age, 2 square feet; 4th age, 6 do; 5th age, 18 do."

About 240 cocoons average one pound, though 95 have been found to weigh as much; and Dandalo gives 360 as averaging a pound.

3,500 to 4,000 cocoons make a bushel.

100 to 120 pairs of millers are necessary to produce one ounce of eggs.

Each miller lays 300 to 500 eggs, but 330 is about the average.

An ounce of eggs contains about 39,000. If these are well saved from the best millers of the first crop, they seldom fail in producing good worms.

A bushel in the natural condition of the cocoons is heaped; when the tow is removed they are measured as grain, on a level with the measure.

The loss in feeding in Europe is estimated at 35 to 60 per cent; in this country, if care is taken, it amounts to nothing.

(*To be continued.*)

Water Rotting Hemp.

We had written for our first number, a full article on the history, cultivation, securing, dew and water rotting of hemp; but unfortunately it was mislaid till out of season. We shall therefore suspend its publication now till February; in the mean time we shall feel under obligation to any one who can furnish us with new information upon this subject, in order to make our article as complete as possible when it shall appear.

Dew rotting is pretty familiar to all hemp growers, we shall therefore pass it over for the present. At $5 per cwt., or $100 per ton, on a suitable soil, it pays as good a profit to the producer, as corn at 40 cents per bushel. Water rotted brings about double this price, and when proper conveniences exist, costs but little more than dew rotting; but in the process, some few difficulties are to be encountered. We think the best plan decidedly, is that adopted by Mr. Olcott, at Newport, Kentucky, in vats under cover, the water in which, is kept at an equable temperature. The hemp thus gets a perfect rot at all seasons of the year, in seven or ten days, and when dried, is of a bright, greenish, flaxen color, and is considered by many, of a better quality, and appears as handsomely as the finest Russian, and brings as high a price in market.

These vats may be easily constructed and managed, and if built in a central position, by a company of planters on joint account, they would be but of small expense to each, and all in turn could be accommodated by them. Although familiar with the process, from frequently visiting Mr. Olcott's hemp factory, we could hardly make the reader understand their construction and management, without numerous drawings; it would be better, therefore, to employ an experienced and practiced hand in their construction and first management. Mr. Olcott breaks his hemp in a machine, which is moved by steam power, previous to rotting, this lessens the bulk greatly, by ridding it of most of its woody fibre; but the process is not essential to rotting in vats, and can be dispensed with where the machines do not exist.

If to be rotted in spring or river water, artificial pools or vats must be formed for this purpose, and should not be over three feet deep, otherwise the hemp is liable to an unequal rot. It will require plank placed upon it weighted down with timbers or stones, in order to keep it well under water. In a communication addressed us on this subject, in April last, Mr. Myerle recommends vats 40 feet long, 20 feet wide, and 2 feet deep, as best and the most convenient for the season, that the hemp is kept cleaner while rotting, and the hands can lay it down in the vats and take it out without getting wet, which is very important to the health of the laborer. These vats also greatly facilitate the operation, and can be fed with water and have it run off at pleasure, without endangering loss from the hemp. Mr. Savage, of Kentucky, informed us when we visited his plantation on the bank of the Ohio, that he intended to water-rot his hemp this year, in a common scow or flat boat, with holes bored in the bottom, and sunk nearly to its top in the stream, which struck us as being a very simple and effectual method.

Water-rotting in streams, requires a longer or shorter period, according to the season. In September, when the water is warm, ten days is generally sufficient; in October, about fifteen, and in December, thirty days or more. For the latitude of Kentucky, October and November are considered the best months for the operation, and perhaps is easiest done, gives more lint, and upon the whole, as good a sample as if deferred later.

Mr. Stevenson, of the Kentucky Commonwealth, was kind enough to send us a copy of his paper, in August, containing, among other communications on this subject, that of Mr. Van Sassen, of St. Petersburg, to our present minister to Russia, Colonel Todd; and sent by him for publication, to the Hon. Mr. Linn, of the U. S. Senate. During a two years' residence at St. Petersburg, we had the pleasure of being acquainted with Mr. Van S., and while there, procured the same information as he details, from the Russian hemp merchants of the interior of the Empire, where it is grown and prepared for market. We had not the opportunity of visiting those districts, nor should we think it very necessary now in order to obtain information, as we are of opinion that the best and most enlightened practice for growing and preparing hemp for market in Kentucky, is in advance at present, of that of Russia; still, as Colonel Todd has been a practical hemp grower at home, there might be some advantage, as suggested by Mr. Bufort, in his visiting the hemp districts of that empire, and making himself familiar, from his own observation, of the details there to be communicated to his countrymen at home, of growing and preparing this important agricultural product for market. We ought to be large *exporters* rather than *importers* of what we can so easily grow to an almost unlimited extent, on the fertile lands of the west.

With the duty of $40 per ton on hemp, which is secured by the tariff recently passed, and the very liberal price of $280 per ton our government seem willing to pay for the American water rotted, it is impossible our western farmers should not at once afford a supply to our own market. We respectfully ask our enlightened and enterprising readers at the south and west, to look to it that public expectation on this subject be not disappointed. A diversion of labor from some other product for this object, will produce a beneficial result in enhancing the price of the former, without diminishing the latter.

MISQUOTATIONS. WHITE BERKSHIRES. SIZE OF SOUTH DOWN SHEEP.—We frequently find ourselves misquoted by different writers in the agricultural papers. For instance, "A Breeder" in the Southern Planter, at Richmond, under an article, "White Berkshires," says: "Tell me why a Berkshire should necessarily assume the dark copper color of his Siamese progenitor, which Mr. Allen asserts is the *invariable* characteristic of the genuine breed?" He then asks: "Did Mr. Allen ever see a litter of pigs from a genuine Berkshire sow, by a genuine boar, that were all of the dark rich plum color that he says *invariably* marks the genuine hog?"

We will answer this question in the Yankee method, by asking another. Where did Mr. Allen ever assert that all genuine Berkshires are *invariably* of a copper or dark rich plum color?" If "A Breeder" will do us the pleasure of a call however, we can show him a very fine litter of pigs, from a "*genuine* Berkshire boar and sow," *every one* of which is a dark rich plum color, with a greater or less flecking of white or buff upon them; some also that are black, and some of a copper color, with the usual flecking, &c. As to *White* Berkshires, we think now we can give their true origin. Marshall, in his Rural Economy of Yorkshire, published at London in the year 1788, says, page 235, vol. 2, "The breed, too," (meaning that of swine in the vale of Yorkshire,) "has been totally changed. The Wold pigs were of the white, gaunt, long-legged sort, which appear to have been formerly the prevailing species throughout the kingdom. Now, the black-sandy Berkshire breed is prevalent; with a mixture, here as in other places, of the oriental species."

We suppose that the produce of these "long-legged, gaunt, white sows," which Marshall describes, from a cross of the "black-sandy Berkshire" boar, was often pure white pigs of a greatly improved form; but notwithstanding their color, and being *grade* pigs, were carelessly called Berkshire's, the same as grade animals are of the Berkshire cross, in our own country, because it happened to be the best and most popular breed, and hence the origin of all the white Berkshire's which have been imported into this country, principally from Yorkshire, and near Liverpool; a good serviceable stock animal enough, doubtless, but no better than thousands of *grade* Berkshires produced here in our own country, without the trouble and expense of importation. The English and Irish Graziers have been greatly improved by crossing with the true Berkshire, and yet they generally retain their white color, though we have occasionally seen the pigs of the Graziers come spotted like a Berkshire, notwithstanding both parents were pure white; and although we strongly suspected that they had Berkshire blood in them, yet we could never fully account for the spots with entire certainty till we lately met with Marshall.

Size of South Down Sheep.—Mr. Mark R. Cockerel asserts in the Nashville Agriculturist, that he does not believe the sheep we selected from Mr. Webb's flock in England were pure South Downs; that no animals of this breed could weigh so heavy and shear so much wool; and that they doubtless "were well crossed with the large sheep known as Cotswold, New-Leicester or Bakewell."

Does Mr. C. suppose that the numerous breeders of South Downs, would stand by at the Royal Agricultural Show, and see Mr. Webb take all the honors from them in breeding, and pocket the comfortable sum of about 500 dollars in addition for premiums, on what would be merely *grade* animals! If he does, he must have a queer idea of the *cuteness* of John Bull. We are familiar with the cross he speaks of, and so are many other Americans, and all Englishmen, and it could be detected in a moment, and would cause the person making such an exhibition, to expulsion from the society, and overwhelming disgrace. We saw roaming over the hills of Hampshire, and Berkshire especially, original South Downs, occasionally, though rarely, nearly as large as Mr. Webbs, but they were much coarser. Now we would ask, is it not within the bounds of probability, that with such material as these for a foundation, that scientific breeders in the space of 50 years or more, could so improve them by selections and good feeding, as to increase their sizes, and add to their fineness of points? If they could not, they must be dull scholars indeed, nor need they seek a foreign cross at all to effect their purpose. The British publications on sheep, in their details, have reference generally to the unimproved South Downs of the hills, and do not refer to what are considered *extra* flocks, like those of the Duke of Richmond, Messrs Ellman, Grantham, Webb and others. We do not think Blacklock much of an authority on South Down Sheep, and the main object of his mentioning them, seems to be, to place them in an unfair contrast on the high bleak hills of Scotland, with the smaller, rugged, mountain Cheviots.

We make these explanations, not for the purpose of finding fault, but to place things, so far as we are able, in their true light.

THE ANNUAL MEETING AND SHOW OF THE ROYAL AGRICULTURAL SOCIETY, took place at Bristol, England, July 12, and continued as usual four days. The New Farmer's Journal, obligingly furnished us by its publisher, F. Crisp, Esq., contains full details of the proceedings. The weather was favorable, and it seems to have been attended by large numbers, and with an increasing interest in the show. We do not enter into particulars, as the general proceedings were quite like those we witnessed of this noble society, at its annual meeting in July, 1841, at Liverpool, and of which our readers will find a detailed account in our April No. We notice that our Minister at the Court of St. James, the Hon. Edward Everett, was present, and made one of the best speeches on the occasion. About £1400, (over $6000,) was distributed in prizes on stock and implements alone. The show of implements, seem to have greatly augmented since last year. We observe a large addition of members to the society in the month of July, and we have no doubt but they will continue to increase; thus enabling it annually to extend its usefulness. We look upon the establishment of the Royal Agricultural Society, as the most useful and important secular institution that was ever formed in England, and the one which is most calculated to add to its advance in civilization, wealth, and the amelioration of its lower classes. A similar one was formed several years since in Scotland, called the Highland Agricultural Society; and we now see that Ireland has this year followed the example of Great Britain.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

Mr. Starr's Woburn Pigs.

GENT: I herewith send you a cut of my Woburn prize Boar, together with a description of my stock of that breed.

As there are various kinds of hogs claimed to be Woburns which differ from each other, I have been at much pains to ascertain as to the genuineness of mine, and give you some testimony on that subject. Last year I engaged Captain Morgan, master of the ship Hendrick Hudson, to go to Woburn Abbey, to procure for me a pair of pigs. He was informed by the steward of the Duke of Bedford, "that in the course of experimenting they had nearly lost the breed, and had no pigs," but one sow was pointed out as a full blood, and in pig. She was very large and very fat. I have since informed Captain M. that there had been doubts expressed as to the genuinenes of different swine claimed to be Woburns. His reply was, "you need not fear about that, you have the real Woburns, and they correspond to those I saw at the Abbey."

Mr. Rufus Rowe, a butcher in Fulton market, was well acquainted with the breed in England, and considers them superior to any other. He informs me that mine are undoubtedly the pure breed.

I have seen a cut in the Complete Grazier, (published in London in 1816,) representing a prize sow of the Duke of Bedford, which is almost a perfect likeness of a sow in my possession. I could multiply evidences on the subject, but will give you some of the characteristics of my Woburns.

Their size is large enough to satisfy any one who goes in for any thing short of a Kenilworth. They are very lengthy, and have a good ham; extremely fine in the hair and the bone, and with a skin thinner than any other hog I have seen opened. The color is white and black. The appearance of the skin and hair is much like some fine China's I have seen, and considering their habits and the ease with which they keep, and the fineness of their flesh, I should call them the China on a large scale. Their intestines are very small, and the whole side very thick when well fattened. During the season of grass, with any thing like decent pasture, they will thrive with fair grazing. I have a barrow which I expect to make weigh next fall 600 pounds, which has been gaining flesh all summer on very moderate fare in the way of grass, with no other feed. The crosses of this breed have given in this region universal satisfaction, and I am constantly hearing boasts from farmers of their fine Woburns. Last fall I weighed a half blood from a common sow the day he was six months old, and found he weighed 224 pounds; his fare was house slop, (no milk) with uncooked indian meal.

Those who had the most inferior pigs stated that on slaughtering, the weights far exceeded their expectations, the intestines being unusually small.

The late Henry Degroot, Esq. of Bound-Brook, in this state, brought from England some years since two pair of pigs of this breed, knowing at the time their name, one pair of which was purchased by Mr. Townsend, of Connecticut, who gave them the name of Norfolk Thin Rind, and who has been celebrated in that state for the excellence of his thin rind hogs. The people of Bound-Brook and that region to this day boast of the superiority of their hogs which they trace back to the stock of Mr. D.

I have crossed my large boar with two Berkshire sows, and their pigs are exceedingly beautiful and promising. I have also the promise in a few days of a litter from a full blood China, by the same boar.

Those who are desirous of procuring any of the above described pigs can address me at Mendham, Morris Co., N. J.

Charles Starr, Jr.

August, 1842.

For prices and other particulars of the above, see our last number. We have no doubt they are a valuable breed of swine, and well calculated to improve the common breeds of this country.

We acknowledge, from an esteemed correspondent, a long and valuable letter, and trust the extracts we give below from it, will not compromit his desire of remaining incog., while they cannot fail to interest and instruct our readers. He has taken our remarks on the subject of mixing fine and coarse wool sheep rather too literally. We would by no means recommend a cross of the Saxon, Rambouillet, or indeed any of the finer, high bred varieties of the Merino family with the Leicester, or any Long-wooled sheep. What we had in our eye for a cross was, the coarser and more common sheep, known as such among the farmers under the general name of Merino: an animal without pedigree, and perhaps not of perfect purity of blood. We quoted Lord Western's ill success, as indirectly expressing our own opinion upon extremes: that is, against uniting the pure high breeds with such as are almost directly opposite breeds of animals. The South Down would undoubtedly be best as the "middle link," recommended by our correspondent to cross either way, as has been often proved by breeders.

I have, moreover, come to the conclusion that controversy with any but the *liberal*, the *candid*, and the *honest* inquirer, is sad waste of truth and common sense, to say nothing of one's loss in time, patience, and good temper—for it seems to me a man can hardly jot down the simplest suggestion that it does not call up and rouse into action the private interests, the prejudice, the self-love, the pride of opinion, or the ignorant garrulity, if not vulgar abuse of some one or more subscribers of the journal in which you may happen to have recorded your opinion. These readers put their own narrow interpretation on your expressions, and then fight you in a half bushel, declaring such is your own ground and on such you must stand or fall. I would, there were some law of nature confining the compass of the mind to objects within the limits of its own powers of comprehension, and not allowing it to strain at a camel when it can scarce swallow a gnat. "Well," you may ask, "how is all this to be avoided?" By the efficiency of the Editor, who should be a *gentleman in feeling;* and possessed of such independence, discrimination, good sound sense, judgment, and that *practical knowledge* of his subject as not to allow his contributors to be hawked at by every "kite that would fain be a tercel gentle," as honest Adam Woodcock has it; and pounced upon by every "gled" that may chance to be on the wing. Of late I have seen too much of that. I think with you that an editor has something more to do than set still while his printer is busy putting in type the abuse that he has thus sanctioned, or promulgating the misconceptions of some hot-headed, prejudiced antagonist, who writes rather to protect his dollar and cent interest, than with any view to elicit truths and facts, and attributes to another his own selfish, miserable motives of action, incapable of comprehending the love of truth for its own sake, or the desire of advancing science as a general good.

"Saxon Sheep" is the very best article Mr. Grove has written; it courts no controversy, for it is based on experience and knowledge, and is liable to no objections on the part of other breeders. Mr. Hepburn's letter is in the proper spirit, and at once proves the value of Agricultural periodicals. Examiner's parody on the weeds of Agriculture was a most happy thought, and a little addition would have made it a most superior essay. In graver matters than breeding sheep, I regret to believe that "L'Academie de Science," is not the very best authority; a single report, a single experiment is often the basis of new and wonderful theories—they seem to hunger and thirst for food they have not the patience and perseverance to work for, and with *some* most valuable, learned, and well-investigated scientific discovery, you will also find the crudest guessing upon other experiments. Some years since I took the trouble to copy out the whole of the paper read before that body on the influence to be exercised in determining the sex of future progeny in animals, but a little practical thinking convinced me that the exceptions were as numerous as the proofs.

My bull, last year, was low in, condition and shut up much of his time; his herd was composed of fine lusty females of his own age, and younger, full of animal vigor, yet the produce were mostly males. Again, you see some females produce males *only*, and some females only, no matter what the sire may be. "J. H. J.," was more to be trusted in his nine years' patient investigation, than the French Academy with its hop, skip, and jump-at-conclusions.

My son's crop of Whittington wheat is again a failure—with us it is a winter wheat; a finer and better plant I never saw—it was necessary to feed it hard with sheep in the spring to counteract its vigorous growth, but it has been badly struck with the rust, and I am sorry to add, has been selected by the grain worm, who has visited this farm for the first time this season. The tea wheat, a spring crop, is *very excellent*, and for this land, gave a good yield, 30 bushels just, per acre.

My seed of the Whittington wheat was imported, and a more beautiful, large, round, fair berry I never saw; I was, however, aware that it was rather thick skinned—its growth was luxuriant and very healthy till affected with the rust; hardy, it must be, or it could not live on these cold hills—they are threshing it to day, and more miserable stuff I never saw go through the fanning-mill. I can hardly believe it to be from the same seed I sowed two years since, did I not know the care it had been grown with, and that it was kept unmixed.

In your classification, you commence with "the horse," do you mean the best *Stallion*? if so, I agree with you; but as *agriculturists*, I think we have nothing to do with your first class. The blood-horse, unless as the sire, best suited on our common mares, to get horses for the saddle and for fast wheeling; the cavalry, I presume, require a heavier, stronger horse; in England, a cross of the Cleaveland bay and Lincoln blacks, both heavy breed, are used for this service. Classes two and three certainly embrace our most useful horses.

Would not a division of our cattle into four classes, be altogether sufficient for the present state of agriculture in the United States? I think it would comprise, for a time at least, all the varieties that will be likely to predominate; a few individuals of other breeds may be introduced as matters of curiosity, but will not the Hereford, the Devon, the short horn, and their grades form the bulk of our stock? The *grades*, in my view, should supersede the native cattle, as their production would be a mere trifle more in cost, and within the reach of every farmer.

I would propose the same number of classes in sheep as you do, but here again, I would exclude the natives, or let them compete with grades in the fourth class; these latter, no matter how bred, intended to unite wool and mutton as far as practicable, should be encouraged as the farmer's sheep, while the purer animals belong more to the flock-master who would be governed in his preferences by circumstances.

Your suggestions for classing pigs, do not quite meet my views, and yet I have none that are better of my own to offer; that they should be divided into two races, the large and small, might be attended with advantage; the one a grass, the other a corn-fed animal.

I differ from you in relation to dairy products, in as much as I think in judging of butter, an especial reference should be had to the size of the dairy. A firkin of butter put down at one or two churnings, does not require the same skill as one of equal size and excellence filled from a small dairy of half a dozen cows. I should therefore class the dairies, for after all, I should expect the most critical observation and the most accurate details from the smaller dairies managed by the frugal house-wife herself.

My observation of some thirty years, and more, has led me to the conclusion that in cross-breeding, *extremes* should always be avoided; that there should be some parity in the habits, characteristics, sizes, and properties of the animals brought together, or no general symmetry would be preserved in the progeny. Lord Western's crosses of fine and coarse woolled animals, you remark, has been attended with questionable results, (though I presume *he* used the South Down and Ryland crosses)—if so, what it to be expected from so wide a cross as the Leicester and Merino! Animals wider apart in every respect could hardly be brought together; nor have I been so fortunate as yourselves in the specimens around me, until a third or fourth cross has given a decided bias in the produce to either the one breed or the other, and I have remarked that it has generally been in favor of the Long-wooled family, probably, from the first dip into that blood, destroying all hope of anything but a coarse, uneven fleece. It strikes me that if there is to be any cross-breeding at all, the South-Down is the middle link, and will unite better with either the Merino and Long-woolled breeds than the attempt to mingling the two extremes directly with each other.

It is but too true, that our farmers have yet to learn that a good agricultural periodical is worth very many dollars to them, and that their folly in not taking one, to those who are daily reaping its advantages, seems little short of *idiocy*; and yet they will pay some shrewd Yankee a $5 bill to tell them in what time of the moon to cut Canada thistles! Notwithstanding I have the advantage of many of my neighbors, in travelling and visiting farms and farmers, and seeing what is elsewhere done, yet the information brought me at my own house by the valuable periodicals of the day is worth to me twenty times their cost: how much more valuable then must they be to those who can neither afford the time or expense of travel! For it will hardly be claimed by any, the most conceited, that they "*know it all*," and have nothing more to learn. Even should they claim the superiority of practice over theory, the *experience of a whole community* must far exceed that of *any single* individual; and it is this very practice and experience that we find offered to our consideration in these valuable agricultural papers.

Dr. Cartwright will accept our thanks for the very interesting and scientific letter which follows. The first portion of it is purely agricultural, and the latter part of it is so instructive for such as wish to make a permanent change of location to obviate hereditary predisposition to pulmonary affections, that we deem it entirely proper to insert the letter entire in our agricultural paper.

For the American Agriculturist.

Mississippi—its Products, Soil, and Climate.

NATCHES, *Sept.* 1, 1842.

GENT.—The Herba Spagna, or Italian clover, I met with, in May 1837, on the margin of the Adriatic sea. It was growing in irrigated fields, and also in the reclaimed soil of what had formerly been salt marshes. The tide water is kept off by embankments, and the surface, which was formerly overflowed by the tides, is intersected with numerous ditches. The land, thus reclaimed, is in checkers or plats of about an acre each. I observed that the ditches, separating the plats, were nearly full of water. The soil, thus reclaimed by ditches and embankments, was covered with a most luxuriant growth of Herba Spagna, standing thicker than clover or wheat, and nearly waist high in May. It differs from the Lucerne I saw growing in France, and other countries, about as much as red clover differs from white. It resembles Lucerne so much as to induce me to class it as a species or variety of that plant. The inhabitants on the Adriatic told me that they cut it nearly every month in the year—that it yields more hay than any other grass—that cattle and horses are much fonder of it than clover—that cows fed upon it give more milk and of a richer quality than when fed on any other kind of food. The plant I observed, had a tap root from one to two feet in length, running straight down into the earth. It delights in a rich, loose, moist soil. It requires three years from the seed to come to perfection, improving until eight years old and living twenty years. It is sown broadcast, but will yield more in drills. The Italians call it Herba Spagna. At Padua, I procured some of the seed, and in March 1838, sowed them on a lot of ground in Natches, which had been in Bermuda grass. The surface, after sowing, was lightly sprinkled with dry manure, which soon brought up the seed. The young plants grew finely. Many weeds soon grew up among them. As it would have been too much labor to pull the weeds up, I had both weeds and Herba Spagna mowed close to the ground. The mowing was repeated monthly. I was glad to find after every mowing, my Herba Spagna outgrow the weeds, and finally smothered them. The crop of hay it afforded the first year, was inconsiderable. But the next year, 1839, it yielded an astonishing quantity. About the latter part of February, it was knee high, and was mowed. It continued to yield a crop of hay every month until the dry hot weather set in, which put a temporary stop to its growth, the soil being too high and dry for it in such weather. In wet weather it would grow nearly a waist high in a month. My horses and cattle would leave any other kind of food, for the Herba Spagna hay, either green or dry. By the third year, 1840, the roots had penetrated the soil to the depth of 18 inches or 2 feet, and it promised to do even better than it had done, and continued to do so, until a long spell of dry weather in July and August. I spent this summer abroad. On my return I found that the Bermuda grass, which is favored by dry hot weather, had come up very thickly among the Herba Spagna, twisted itself around the neck of the root and killed a good part of it. In 1841, the Bermuda grass entirely killed it while I was again absent.

I spent two summers with my family at Biloxi, on the sea coast of Mississippi, for health. I observed on the margins of the various bays and bayous, which indent the Mississippi sea coast, a large quantity of land, similar in every respect, except in its unimproved condition, to the kind of land on which I had seen the Herba Spagna so luxuriantly growing in Italy. The land, at high tide, is partially inundated and requires nothing but embankments and ditches to make it as valuable as similar lands on the Adriatic. Embankments, some three or four feet in height, with ditches and locks to let the rain water off, would reclaim thousands and tens of thousands of acres on our gulf coast. As the soil of these unreclaimed low lands is a rich black loam, I have no doubt but that the Herba Spagna would grow finely upon it if reclaimed. It would also grow upon the higher hommoc land of that vicinity. Whether it would flourish in the sandy pine lands of the sea coast counties and the interior of Mississippi, is questionable, but worthy of a fair experiment.

The long, dry, and hot weather in this latitude kills nearly every kind of valuable grass except the Bermuda. The latter grass will not grow in the shade, and is apt to be choked by weeds and briers. The sea coast counties and the pine woods of Mississippi, are almost uninhabited, mainly for the want of grass to make hay. The lands, except on the margin of brooks and rivers, are too poor to make a sufficiency of Indian corn to supply the purposes of hay. Even on our best lands, all our experiments with the perennial fibrous rooted plants have been a failure. Timothy, orchard, herd, and blue grass, as well as red clover and the Italian rye grass, flourish well enough until our dry hot season of the year, when they are apt to die. Even when sowed in low ground and protected from the sun they cannot, in general, endure the heat and drought of our summers. A wet season they promise to do well, but a dry season kills them. Thus will it ever be with the perennial fibrous rooted plants. The grasses so valuable in higher latitudes, mostly have such roots. The Herba Spagna, however, has a root entirely different, being a long fusiform root, extending at least a foot deeper than any of the fibrous rooted grasses. The tap rooted plants, the creepers of nearly all kinds, and the repent plants, as the Bermuda grass, the strawberry, sweet potatoe, &c., flourish better in this climate than any other kind of plant. Our cotton plant, you probably know, has a long forked fusiform root, penetrating the earth to the depth of two feet. After it gets a month old, dry weather never hurts the cotton plant. The growing crop will be short from too much wet weather, as a large portion of the "*forms*" or young bowls have fallen off.

On Ship Island, opposite Biloxi, a bank of sand, I found all the indigenous vegetation had either long tap roots, thick fleshy leaves, or were creepers and repents. Some of the repents were a hundred yards long, running on the ground, and at short intervals, taking root like a strawberry vine on a large scale. *Observing the natural growth of any country, and noting its peculiarities, is a good method of interrogating Nature.* Interrogated in this way, Nature responds that the Herba Spagna, by virtue of its long fusiform root, is well adapted to southern agriculture. These observations apply to perennials and not to annuals. Many of the latter, as Indian corn, come to maturity before the dry, hot season of the year has fully commenced. But all annuals, which do not mature early, must have long tap roots, or be repents or creepers, to do well in this country. The fibrous rooted plants, as Indian corn, as the dry season approaches, require to be *hilled up*, that is, for the earth to be drawn up around them, giving them more depth of root and making them approximate the long tap rooted plants. The latter, as cotton for instance, is injured by much or even any hilling; maize, however, has to be hilled in dry, hot weather, or it will fire and perish.

There is a repent plant called the coco, in Louisiana and Mississippi, which, instead of running on the surface of the earth, runs down into it to the depth of four or five feet, and horizontally a little under the surface, mole fashion, and at short intervals throwing up a bunch of thick, coarse grass. A better idea of this plant can be formed by calling it a subterraneous strawberry. It bears nuts under ground the size of strawberries. Their bitter taste distinguishes them from the nut grass, called sweet coco. The bitter coco grows so fast, that double the number of laborers are required to cultivate the lands infected by it. All those who, ignorant of this pernicious repent, have purchased coco lands, have paid dearly for the want of a little practical information, as they are nearly all bankrupt. Many have wisely abandoned their coco plantations. No means have been discovered of extirpating this pernicious repent when it once gets fixed in the soil. This unconquered enemy of southern agriculture, nevertheless proves the natural adaptation of the soil to the repent family of plants; while the successful cultivation of cotton, asparagus, okra, the egg plant, and tomato, which have long fusiform roots, with many lateral branches, prove that the long tap rooted plants are particularly adapted to our agriculture.

If the long tap rooted Herba Spagna succeed in the south, the sea coast counties of Mississippi, now almost uninhabited, will form the most desirable residences imaginable for all that portion of our northern brethren who are predisposed to pulmonary consumption. The flaxen-haired, blue-eyed, narrow-chested inhabitants of our northern states, who mostly die before they are one score and ten, would stand a good chance of living to be three score and ten in the sea coast counties of Mississippi. I do not include those whose lungs are already ulcerated. Such persons die sooner in the south than in the north. Those, however, who are predisposed to pulmonary diseases, or have only a beginning inflammation, may have the best hopes of health and long life, by an immediate emigration to the south. *I mean the right places in the south.* Unfortunately for such emigrants, they nearly all direct their steps to the malarious districts of the south. A severe acclimation awaits them therein, which greatly thins their numbers. The richest lands and most wealth, are found in the malarious districts of the south. But if emigrants were content to settle on poor lands, which although considered of little value here, where labor is dear and population sparse, would be esteemed as highly valuable if they lay in New England or New York, they would be entirely out of the malarious region, and in a country equally as healthy as the northern states, and not subject to pulmonary diseases. The emigrants might embark at New York or Boston with all their effects, household furniture, farming utensils and provisions, in vessels not drawing more than eight or ten feet water, and in a few weeks find themselves, vessels and cargoes, far up in the interior healthy pine region of Mississippi. They could step out of the vessels which brought them from New England or New York, upon Congress land in Mississippi, subject to entry at a dollar and a quarter per acre. The practicability of penetrating the pine woods of Mississippi in steamboats and schooners not drawing more than eight feet water, is a fact but little known. It was not until I had spent the second summer on the sea coast of Mississippi, that I was apprised of the fact myself. While residing at Biloxi, I was sent for, to see a patient about fifteen miles in the interior pine woods. After travelling on horseback in a blind path for a considerable distance through the pine wilderness, I was amazed at beholding through the pine trees, a two masted vessel with sails spread, majestically gliding through the tall pines, no water being visible. On approaching the schooner, I found it was sailing in a narrow natural canal, having perpendicular clay banks and a depth of water of thirty feet. The schooner carried an hundred tons. The captain told me he could go some twenty miles further up into the interior of the pine woods. He informed me that the bayou his vessel was in, was the Tunica Buffa, which was only one of three long natural canals called bayous in this country, leading from the bay, at the back of Biloxi, called Back Bay, into the interior pine woods some twenty miles or more, where the tide water ceased and the bayous receive large running streams of fresh water from the pine wood hills. He assured me that the bayous were nowhere less than thirty feet deep, until they extend back some twenty or twenty-five miles. Biloxi is on a peninsula as wide and as long as the peninsular tract of land between the Battery and King's Bridge, the Hudson and East rivers. Back Bay lies immediately behind Biloxi, and is from one to two miles wide and longer than the East river. Instead of expanding, like the East river, into Long Island Sound, it contracts itself into the above-mentioned natural canals. The bay is deep enough for the heaviest ships of war to float. But an oyster bank and sand bar lie at its entrance, preventing any vessel from getting into the bay from the Gulf of Mexico, which draws more than eight or ten feet of water. The bar of oyster beds and sand is about two miles wide. It is of recent formation. The oyster beds, no doubt, made the bar. It did not exist when the French, in 1699, discovered this part of Louisiana. The French vessels came into Back Bay, which, it is said, they mistook for the mouth of the Mississippi river. It looks very much like the mouth of a great river. They built a fort at its entrance. You will see the location of the fort by turning to a map of Mississippi, (marked old French fort,) but you will look in vain on the maps for a correct delineation of Back Bay or its arms, the natural canals above-mentioned.

The fact is singular, that two miles in the interior, from the very spot of earth first settled upon by Europeans, in Louisiana, remains to this day, a terra incognita to our geographers and map makers. Fortunately a map of Scotland will give a pretty correct idea of the geography of this part of Mississippi. Jura and Islay isles off Cantire, represent Ship and Cat islands off the peninsula of Biloxi. Cantire and Biloxi are alike in shape, the former being the larger. Cantire is separated from the main land by the Firth of Clyde; Biloxi is separated from the main land by Back Bay. The river Clyde, on which Glasgow stands, is a good representation of the natural canal putting into Back Bay, called the Tunica Buffa, and where it receives a little river from the pine hills, some twenty miles in the interior, would afford a better situation for a large manufacturing town than the river Clyde on which Glasgow stands. Where the Tunica Buffa river falls into Tunica Buffa bayou, a fine water power could be obtained for driving any kind of machinery.

Silk could be raised in any quantities in Southern Mississippi, as the mulberry grows finely on the poorest land. Upland rice and sweet potatoes, also grow well in the pine wood soil—peas likewise. The better kinds of land and the salt marshes, if reclaimed, would no doubt afford a sufficient quantity of Herba Spagna hay to enable the inhabitants to supply the New Orleans and Mobile markets with mutton, beef, butter, &c. At present this section of country sends nothing to those markets but fish, crabs, oysters, shrimps, turtles and wild fowl, from the waters; and venison and wild turkies from the woods. After the French discovered the mouth of the Mississippi river, they abandoned their settlement at Biloxi, and removed to the spot on which New Orleans now stands.

They transported, however, to their original settlement, a number of Gipsies, who intermarried with some of the primitive French settlers. The descendants of the Gipsies at the present time, constitute the larger portion of the inhabitants of Biloxi, Back Bay, and the above-mentioned natural canals. They are an ignorant, simple-hearted people, full of fun and frolic, but have no energy nor industry. They have neither schools nor churches; priest nor parson; physician nor surgeon; lawyer nor school-master, among them. As an evidence of their want of reflection and industry, the town of Biloxi was nearly an hundred and thirty years old before it had a wharf. The water is shoal in front of it. Schooners, sloops, boats, &c. cannot come within one or two hundred yards of the shore. The cargoes were taken and discharged on men's shoulders and partly by light perogues. A few years ago a German emigrant, at the expense of a hundred dollars, built a wharf, and broke up the occupation of the water-waders. Another blue-eyed emigrant cut up a large pine tree, which for a whole age had laid across one of the principal streets of the village. That portion of the Gipsey French living on Tunica Buffa and the bayous of the Back Bay of Biloxi, are few in numbers and far between. They cultivate a little rice, and have some good fruit trees, but the larger portion, living at Biloxi, cultivate scarcely any thing. The soil on the coast, for a mile ar two back, is barren and sandy, too much so to justify improvement for agricultural purposes. Good gardens are made by the wealthy at great expense. It is covered with live oaks, mulberry trees, magnolias, &c. Some live oaks in Biloxi are so large that the branches of a single tree form the radii of a circle more than three hundred feet in circumference. The Duke of Saxe Weimar says that the largest tree in the world is a live oak in front of M. Pradat's house in Biloxi; but the noble German is mistaken. The coast, shaded by the magnificent live oaks, magnolias, mulberries, junipers and laurels, and fanned by the cool sea breezes, is well located for summer residences. Many of the inhabitants of New Orleans have pretty villas along the coast, particularly at Biloxi, with neat bathing houses in front of the villas. On Back Bay, however, and the country in the rear of it, watered by the Tunica Buffa, and the other bayous leading into Back Bay, the soil, though in general thin and sandy on top, has a good clay foundation in reach of a two horse plough, and is consequently susceptible of indefinite improvement. The means for enriching it is immediately at hand, consisting of extensive beds of calcareous and argillacious marls. It contains many strips of rich hommoc land. It also contains great quantities of low land, exceedingly rich, but considered as valueless, in consequence of its being partially inundated by the high tides. If embankments were made and ditches cut, the whole of this low ground might be converted into luxuriant fields of Herba Spagna, or could be made to yield almost any kind of vegetation, which will grow in the south. Still deeper in the pine woods among the hills, beyond the plain watered by the bayous flowing into Back Bay, the land is said to be very poor, and I am not prepared to say whether it be susceptible of much improvement or not. Its soil is no where too poor for vines, sweet potatoes and mulberry trees. Nearly all the land in this region of country, except a little strip fronting the Gulf of Mexico, belongs to the United States government, and it is subject to entry. Vessels drawing eight or ten feet water, only can come directly to it from New-York, and at all seasons of the year, carry its products direct to New Orleans or Mobile—neither of which is more than one hundred miles by water; say thirty miles from Tunica Buffa, at the head of tide water to Biloxi, and about seventy from Biloxi through the Rigolets and the St. John Canal to New Orleans. The navigation is very safe, being protected by islands and the main land nearly all the way. I know a Gipsy Frenchman, who frequently goes from Biloxi to New Orleans in a small canoe. The waters abound with fish and fowl of nearly all descriptions. The oysters are excellent and abundant. If the oyster bank and sand bar at the mouth of Back Bay were removed, ships, drawing 30 feet water, could go in and out of Back Bay and up the natural canals into the pine woods. The indigo plant and Balmi Christi grow luxuriantly without cultivation. The sweet potatoes, of a kind called the Bermuda potatoe, and better flavored than any other kind, turn off abundantly in the poorest land. The grape, the fig and peach also, do well.

The musketoes are not troublesome, except in the vicinity of fresh water ponds. The salt marshes do not breed them. Very few are seen at Biloxi. Some of the situations on Back Bay are troubled with them. I saw none on the above-mentioned natural canals leading into Back Bay. So far from musketoes being regarded as an evil, they should be viewed as kind messengers sent to warn the agriculturist against the danger of suffering stagnant pools of impure water to be about his premises, and to caution him against the unwholesome dampness of too many shade trees around his house. In the shade it is always cool in this country. Nor is it necessary that the shade should be very thick, so as to create dampness. With the exception of four hours, from eleven to three o'clock, this climate is not hotter in the sun than summer weather in our northern states. In the shade, it is nearly always as cool as it is in the north, during the summer season. The four hours, above alluded to, might be advantageously employed in silk weaving or some in-door work, or in mental improvement. By avoiding exposure to the noonday sun, the cool night air is never injurious. Total abstinence from spirituous liquors is also as necessary to preserve health, or more so, than keeping within doors or in the shade during the hottest part of the day. The yellow fever, the scourge of our southern cities, never extends into the country. It would probably not affect our cities so much, if the houses, instead of being built adjoining one another, forming continuous lines of buildings, were built separate and apart, like the English residences in Calcutta.

When we reflect how much the world is indebted to the cotton plant for a cheap article of clothing, and how much Ireland is indebted to the potatoe plant for a cheap article of food, it is not too much to hope that the Herba Spagna may be an important agent in transmuting the present barren and almost uninhabited sea coast counties of Mississippi into rich, healthful and happy homes to a large portion of our northern brethren, who would otherwise fall victims to a lingering disease in the springtime of life. The country wants gray and blue eyes,—many blue-eyed people of the north want such a home.

I have the honor to be with great respect,
Your ob't serv't,
Sam'l. A. Cartwright, M. D.

For the American Agriculturist.

Gananoque, U. Canada, *Aug.* 29, 1842.

Gent.—I have some thought of changing horses for mules to do the labor on my farm. Could you inform me through your excellent paper, where I could get a good Jack to cross with our U. Canada mares, and what price I would have to pay for him.

I am, my dear sirs,
truly yours,
J. Lewis Macdonald.

Will some of our readers please to inform us where the above animal can be procured ?—Eds.

To Correspondents.—Our thanks are due to F. Crisp, Esq. of the New Farmer's Journal, London, for copies of that journal, containing the proceedings of the Fourth Annual Meeting and Show of the Royal Agricultural Society of England, held at Bristol July last.

To Thomas Bates, Esq., of Kirkleavington, Yorkshire, Eng., for part 1, vol. 3. of the Journal of the Royal Ag'l. Soc. of England; also for the Annual Report of the Yorkshire Ag'l. Soc., consisting of 200 pages of highly interesting matter.

To B. L. C. Wailes, Esq., Pres't. of the Ag'l. Hort'l. and Bot. Soc. of Jefferson College, Washington, Miss., for his patriotic, sound and sensible Address before that society.

The letters of Judge Beatty and **Dr. Keever, will** appear in next number.

LADIES' DEPARTMENT.

For the American Agriculturist.

Autumnal Reflections.

Nothing more insensibly saddens and affects the heart, than the first impression made on us by the gradual approach of the fall of the year. A tinge of melancholy is abroad over the landscape, lately so fresh and verdant. We are taken by surprise, so imperceptible is the fading of the leaf, the increasing stillness, which has succeeded to the merry hum of insects, and the music of birds; the solemn grandeur of the yet unmolested forests; the clear, cold, unclouded heavens; the universal repose of nature, as of a weary man, who has run a race; that "sere and yellow leaf" in which we've trampled; and here, another, ah, 'tis an emblem of our own fading life. Indeed, the whole outward world, like the expiring mortal, who, but yesterday, stepped proudly, with lifted brow, and bounding pulse, has felt the cold chill of decay, and tells us but too impressively, the "very pulse of life will soon stand still." If inspired by the strong emotions which the season awakens, we leave entirely the haunts of men, solitude only imprints more deeply her thousand lessons. Vegetation, from the crisped herbage to the brilliant and mottled dyes of the trees above us; the little rivulet, which bears on its lately unspotted bosom the fallen leaves of the o'erhanging shrubs; the heavy mists of morning, beautiful in dispersing, but sad encroachers on the long, bright summer's dawn the splendid hues of the last of the floral race, lifting their gorgeous heads amidst surrounding decay: all of these, which are but some of the lineaments of the dying year, are striking monitors of the flight of time, and forewarn us of the wintry shroud, which must soon envelope all. But Christian! turn thine eye away; the brighter spring shall surely dawn again, to thy better hopes, an emblem of that resurrection morn, which shall usher in the unfading spring-time of a glorious immortality, by the tree of life which never withers, "whose leaves are for the healing of the nations," and by the crystal waters of that river, which flows on forever, through the "green pastures of the Paradise of God." Thus, when *our* youth's fair dawn, has fallen half unnoticed, into the deeper flush of life's troubled autumn, may we anticipate an end as peaceful, and a destiny as desirable. But there are other aspects in which this season presents itself, less fraught, 'tis true, with gloom to the melancholy, or with lessons of wisdom to the serious, but to the eye of philanthropy, sober autumn is always radiant in the rich and golden beauty of future promise; and the agriculturist gladly beholds the result of his toils, so long protracted in the summer's heat. A grateful joy fills his soul, that he has not spent his strength in vain.

The prospect of future abundance, from his well-stocked granary, to the inmates of his little home, has hitherto cheered him on, making hardship light to him; and many a happy scene has his fond fancy pictured, during the long, tedious day of toil, of the merry faces that will surround his festive board and his bright hearthstone, the coming winter. We shall look in vain, in the proud domains of ease and opulence, for lighter hearts than we may find in harvest-season, in field and meadow, under the plain garb and sun-burnt exterior of the farming population. The orchards are now drooping under their rich burdens, and the fields are covered with ripened grain, where not already cut, ready to be gathered in. At every turn we meet the well-filled carts of various grain and fruit, perfuming the air with its luxurious odor. Ceres, Pomona and Flora too, unite to praise the dying year. Our hedge-sides and woodland scenes are again brilliant with the floral beauty, of late, in some measure withheld. The gorgeous sun-flower, (Helianthus,) the yellow fox-glove, (Gerardia,) and the golden rod (Solidago, Canadensis,) impart a glowing tinge to the whole landscape, and contribute their charms to the rude, wild banks which border the little creeks and quiet streams so cheerfully fringed with the snowy blossoms of the arrow-head, (Sagittaria)—and more brilliantly beautiful, the cardinal flower, (Lobelia,) still displays her scarlet blossoms in the marshy intervals—neither should we forget the thoroughwort, (Eupatorium,) which never fails to shew itself at this season: an humble plant, lightly esteemed, perhaps, by the more scientific sons of Esculapius, but yet worthy of notice, being considered invaluable in the domestic medicine of our maternal friends. Nature now seems to have tasked her powers, for one last effort, to tint the waning year with unrivalled brilliancy. The skies in the earlier part of this changing season, are clearer and more bright, and clouds less frequently cast their shadows over the world below. The artist's pallet can afford no hues as gay as those which now bedeck the meadows, and the sylvan heights which encircle them; and he aims in vain at grouping as graceful as the unstudied negligence of heaven-inspired nature. By night she pencils with her frosty fingers, and how wondrous the glories which the morn reveals over the scene recently so soft in its cheerful green. The contrast is as striking, and affects us in like manner, as does the unadorned simplicity of the fair maiden in her young and joyous beauty, and the richly decked appearing of the matured woman in her prime. We linger while we may, in the sweet and charming presence of the former, though we have our willing tribute of admiration for the more commanding beauty of the latter. We now feel sensibly, the loss of the sweet harmonies, which so lately made our fields and groves vocal with song. The parent birds, prompted by instinct, have taught their young ere this, to extend their flights, preparatory to their long migration, and the less hardy, are already on their trackless way. Rarely, indeed, do the cheerful "wood-notes wild," which so late delighted us, remind our saddened spirits of the merrier days gone by, unless aroused to a livelier emotion by the occasional melody of the feathered loiterers, which remain till the universal brown of late autumn succeeds to the transient glories of the early frosts, and wraps forest, flower and lawn in its own sombre hue, which is soon to be followed by the more chastened livery of winter. Yet in this mournful appearance of the departing season, it is animating to know that over the apparently barren earth, the enlightened husbandman has diffused the germ of another harvest for the succeeding year; that unpromising as the scene now is, nature is yet silently busy in conveying her living juices to the countless buds she has so carefully enveloped; and that what seems the grave of nature is but the cradle of a new existence. The season too is approaching, when in quiet fire-side enjoyment, our life, unlike the bright dream of summer, will seem a more real thing, and if our spirits are not as joyous, our happiness will be more substantial, and in the reciprocation of sweet, domestic sympathy, less selfish.

But there are some, we fear, who have no eye to enjoy, nor soul to appreciate, the vicissitudes of the varied year—

"The sweet approach of even, or morn,
Or sight of vernal bloom, or summer's rose,
Or flocks, or herds,"—

or bounteous autumn richly clad in brown and gold, yet it is surely well to study in the arrangement and operations of our seasons the love and wisdom of creation's great Author, though sometimes, on the heralding of winter, we may, with the birds, wish for the favored climes of perpetual verdure, where the eye regaled with nature's softest charms, and the ear entranced with song, like them we may enjoy only associations of unfading youth and beauty.

September, 1842. ELLA.

Preservation of Herbs.—Every diligent housekeeper should complete her stock of herbs without a moment's delay, as the frost will soon place them beyond her reach. Many of these are invaluable for the little necessities that occur from time to time, while the green plants are hoarded in the earth not to be come at till another season. When gathered and dried *in the shade*, they should be carefully packed away beyond the reach of vermin, dampness, or other injury, and the fragrant herbs should be closely sealed up in jars, air-tight boxes, or paper bags to retain their odour.

SELECTIONS.

Culture of Cotton.—There are many around us who think the surface-culture of cotton, or of crops, a new-fangled notion, and scout at the idea. All encroachments on established usages and customs are received in this very way. There are others who think it has done and will do for the north, but will not in the south. I will state one circumstance, and close by citing one fact. In 1833, I think, I planted in the same field, about twenty acres of cotton, as usual barred off and scraped. The subsequent culture was entirely with the hoe and sweep, the latter merely shaved the surface, probably to the depth of one-half to one inch; also three acres, and cultivated as was customary: plowing three times and hoeing. There was but a path of eighteen to twenty-four inches dividing. Land as near similar as could be, only the first piece had been cleared five years, and the second piece only two years; therefore, the latter should have resisted the drought best. Mr. Wm. Montgomery, my neighbor, a practical farmer of some thirty years' standing, ridiculed my notion, as I had been but recently from school. I took him into the field to look at it. He admitted that the unploughed land was the best crop, and had sustained itself the best through the season, but could not account for it. Now every gardener knows the fact, that his garden returns him a greater income than any other spot he can cultivate. The plough never enters, nor is the earth disturbed two inches from March till July. He cultivates the surface entire, having previously spaded deep and manured well. Then, if this be so in reference to raising vegetables of the top-rooted and horizontal-rooted families in the garden, may it not be well to try it elsewhere, especially as more land can be cultivated and kept cleaner?—*Western Farmer.*

A Vegetable Compass.—A correspondent has sent to the editors of the National Intelligencer, a dry-pressed specimen of the Polar Plant of the western prairies. It is a species of fern, which generally attains the height of from 10 to 16 inches, with one large flat leaf, whose plane always points to the north and south. The specimen was plucked from the prairies near Fort Gibson, west of Arkansas. It is spread profusely in large beds over all the western prairies, from the far north-west to the far south-west. It has been seen in the prairies of Wisconsin and other regions east of the Mississippi. It is never found in the forests, or in other words, out of the prairies. It has been well known to the hunters and trappers of the west, and to the officers of dragoons; but it is believed that its existence has never (at least extensively,) been made known to the world. Its plane is always in the plane of the meridian, when not disturbed by high winds or other external causes. The indications are always most accurate in the valleys, where the beds are sheltered from the winds, and where the traveler finds them arranged in parallel positions, faithfully pointing out the direction of meridian. The leaf is symmetrical, and thus there is nothing in its indications to distinguish the north from the south.—*Nat. Intel.*

Corn Stalk Sugar.

Raising Corn for the manufacture of Sugar.—*By Wm. Webb, of Wilmington, Del.*—(*Concluded from the last Number.*)

For evaporation, flat bottomed pans are recommended, made either of copper or boiler sheet iron. If the situation will admit, they should be so arranged, that the juice will run from one to the other, and thus save the trouble of lading. The lower pan should be furnished with a spout at the bottom, (not less than four inches in diameter,) by which its contents can be drawn off. The shape of these vessels should be oblong, their sides and ends sloping at angles somewhat different in each. In the upper pan where the juice first enters, the sides form an angle with a line perpendicular from the bottom of about 30°. In the lowest pan, this angle should not be less than 45°. Skimmers with rectangular, instead of circular edges, must be employed for removing scum. The syrup is brought, in the latter vessel, to about 25° by the saccharometer, when it is withdrawn into a large wooden reservoir, whose depth should be at least three feet. To finish the evaporation the Bascule pan is recommended; this is extensively used in Louisiana, and has over the kettles the advantages of completing the operation with greater rapidity and safety—of enabling the operator to carry the boiling completely to the point of granulation, and then to decant the whole charge instantaneously into the cooler; also of giving to the sryup time for depositing a heavy sediment of impurities, not otherwise separable from it, but which, on the old plan, goes forward to impair the granulation, and to discolor the sugar; and, finally, of allowing the proprietor to superintend in person the concluding and most delicate part of the manufacture: one Bascule pan being sufficient to evaporate to the granulating point, in twelve or fifteen hours, all the juice which two sets of kettles can evaporate in twenty-fours, to the point of concentration mentioned above. This pan is of a circular form, made of copper, fourteen inches deep, five and a half feet in diameter, and sixteen inches deep near the lip, or in these proportions. It is mounted over a separate furnace—is moveable upon its axis, and is furnished with a large lip, over which the whole contents may be poured into a receiver. On one side of the vessel opposite the lip is a rope or chain attached to a pulley over head, by means of which it is quickly emptied. "In using this pan, the juice is evaporated in the kettles as before, but is struck, between 25° and 28° of the Hydrometer of Baumé, into a large cistern capable of containing at least four or five hogsheads, where it cools, and deposites a thick sediment. From this reservoir, it is pumped up, from time to time, into a smaller one situated just above the Bascule pan. The operation with this apparatus is as follows: The gate attached to the reservoir of syrup is raised, and the bottom of the pan covered to the depth of four inches. A brisk fire being kindled under it, boiling soon commences; a slight scum rises, which flows down into the lip, whence it is removed by means of a hand skimmer. The striking point is ascertained as in the kettles, except that a thermometer is often made use of to learn its approach. When struck, the thermometer stands from 236° to 238°.

To assuage excessive ebullition, it is customary to throw in a small piece of lard or of butter just previous to the completion of the cooking; and at the moment of decanting the charge, notice is given to the fireman, who closes the ash-pit door to prevent the flames from rushing up into the boiling apartment, to the inconvenience of the operator, who is stationed upon the rim of the furnace by the side of the pan. Immediately on its being discharged, it is suffered to fall back to its place, and the gate of the reservoirs is lifted as soon as possible, in order to cover the bottom of the pan before it becomes too hot from the action of the flame.

The time required to perform the operation varies from twenty to thirty minutes, and the result is a highly improved sugar, with the estimated gain of one hogshead in fourteen over the old method."

Dutrone found, by experiment, that the quantity of matter which unites the most favourable circumstances for crystalizing the sugar, is from fifteen to sixteen cubic feet; and it was from this knowledge, that he regulated the form and dimensions of the cases about to be described. He made many trials of cases differently shaped at bottom, and ultimately fixed upon the following, as most convenient and effective. The crystalizing case is made of wood, and ought to be five feet long and three feet wide. Its bottom is formed of two planes (like a trough) the uniting of which forms a channel. Along this channel twelve or fifteen holes, an inch in diameter, are bored for the molasses to drain through; the depths of the case is nine inches at the side, increasing towards the channel, where it is fifteen inches. When syrup is poured into these cases the holes are stopped with plugs; after it has crystalized, these are removed, and the sugar becomes drained. The rooms in which the operations of crystalizing and draining, or curing, are carried on, should be kept at an even temperature of about 80° F.

Enough has been said to enable any one so disposed to manufacture sugar from Maize, either on a large or small scale. As to the profits of the business, I shall make no positive assertions; experience on the subject is yet too limited to warrant them; and as all the facts in relation to it are now before the public, every one interested can draw his own conclusions. It is said by those acquainted with the cultivation of the cane, that that business cannot be carried on profitably on less than one hundred acres in crop, and that attempts on a small scale will be certain to fail with a great loss of time and labor. How far this may be applicable to corn, remains to be seen.

I will only add in conclusion, that whether or not sugar from the corn stalk may soon become an article of profitable export—its manufacture in the simplest form will enable every family to supply themselves with this article for common use, now become so much a necessary of life, and thus save a considerable bill of expense yearly paid for foreign sugars.

The Bee.—Providence, that delights in spreading benificence as well as beauty over all creation, has wisely formed the bee as an humble but active and untiring agent, in gathering up for the most important purposes, and converting to the most valuable use, the scraps and fragments of nature which would otherwise be scattered by the "viewless winds," and spread through the "ambient air." She has adorned the song of the poet, pointed the tale of the moralist, and furnished food to the hungry in the desert. Virgil calls the bee a ray of the divinity; Plutarch pronounced her a magazine of virtues; Quintilian asserts that she is the greatest of geometricians; and Watts, by calling in poetry to the aid of morality, has rendered her figure the means of interest, improvement, and delight to many a youthful mind. Philosophy has stooped to examine her habits and to watch over her haunts; she has presented the models of science and called forth the attention of scientific men; by her the husbandman has been cheered when sitting in his cottage garden, in his evening reflections on his day of toil; and in whatever light she may be viewed, there is none who can declar that he has no interest in her ways.

REVIEW OF BOOKS.

Antique System of Husbandry

"Foore Bookes of Husbandrie, collected by M. Conradus Heresbachius, Counsellor to the hygh and mightie Prince, the Duke of Cleue; conteyning the whole arte and trade of Husbandrie, with the antiquity and commendation thereof. Newly Englished and increased by Barnabe Googe, Esquire. Genesis 3. 19,—In the sweate of thy face shalt thou eate thy bread, tyll thou be turned agayne into the ground, for out of it wast thou taken : yea, dust thou art, and to dust shalt thou return. At London, printed for Iohn Wight, 1578."

For the perusal of this relic of the olden black letter times, we are indebted to our friend, the Rev. J. O. Choules, whose zeal for the cause of agriculture, and taste for whatever is rare and recherché, has prompted him to collect and preserve one of the best selections of valuable literary antiques on this subject, possessed in this city. As indicated in our last, our object in referring to this work, is to afford our readers some choice specimens of the extremes of truth and error; sense and nonsense ; just observation, accurate judgment, and nice discrimination, combined with a wholesale admission of the merest figments of the brain, the confident belief of the most preposterous conceptions, and the indiscriminate acceptance of the most absurd legendary superstitions, which characterise the old writers. The style of our author is clear, concise and comprehensive, and of classical purity; and in brushing away for a moment some of the cobwebs that time hath allowed to cluster before the furrowed, yet benignant and placid visage of this choice old spirit, and shaking off some of the ancient dust that sanctifies, rather than defaces his venerable brow, we trust we shall afford both entertainment and instruction to our readers. They will not fail to perceive the advantage they possess over their ancient fellows of this time honored craft. When they look for instruction to the writings of the present day, they are not put off with a medley, where the good and bad are so mixed up, that the corn can hardly be winnowed from the chaff; for they know whatever will not bear the test of fair experiment, has been discarded from the principles of those who presume to act as guides. Without further comment, we will proceed to make such extracts as our brief limits afford.

After a eulogium on the usefulness, dignity and happiness of rural life, fortified by such authority as Nestor, Socrates, Xenophon, Lucullus, Scipio, Cicero and others; his first proposition is that "the maisters foote is the best doung for the feelde;" or as the modern maxim is, the master's eye (overlooking his men,) does the most work—a rule that has been orthodox since the first day Adam was driven from the Garden of Eden, and will be while the human race endure. His next, sustained by Cato, is that "a good husband must rather be a seller than a byer;" which is equally applicable to all times and places. A third proposition is that "an euil garden, betokeneth an il huswife;" which is as true now as 300 years ago, for a notable housewife will see to it if her husband does not, that the kitchen garden, herbarium, and flower stands, are well supplied from this store-house of goodly things.

He quotes for the edification of the literary farmer, "from the Ermite Sainct Antoine, who says, the whole world serued him for bookes, as a well furnished library, in which he always read the wonderful workmanship of God."

The indications of good soil are clearly pointed out by the location and appearance, and the natural growth of vegetation. Luxuriant "Bulrushes, Thistles, Threeleaued Grass, Danewort, Brambles, Blackthorne, and such like as neuer grow but in good ground," shews where the good, but neglected land lies, in all ages and climes. But annexed we have a spice of gullibility that Munchausen would envy in a reader. "Under the North Pole it is reported the grounde is so fertill, that they sowe *in the morning and reape at noone.*" The custom of "planting in Barbarie, under the Date the Olive, under the Olive the Figge, under the Figge the Pomegranate, and under it the Vine; under the Vine they sowe Wheate, and under Wheat, Pulse, all prospering under the other's shadow, and yeeldyng their fruite the same yeere;" we know not whether taken in a limited sense, it be true or false. It is likely however when they find an oasis in that arid clime, fed by some spring or rippling stream, they cluster the whole variety of their crops, and the piercing rays of the torrid sun, afford sufficient heat to mature them all.

He specifies "*Three sorts of Doung*; the first of Poultrie, the next Human, the third of Cattell. Man's urine, being three moneths kept and poured upon the rootes of Apple trees and vines, bringeth greate fruitfulnesse to the trees, and yeeldethe a pleasante fruite. Old doung is best for corne and new for meddow. What time so ever it be applied to the ground, you must look that *the winde be westerly, and the moone in the wane.*" *Lime and marl* do not appear to have been used in our author's time in England, except in parts of Sussex and Kent, but he refers to its application elsewhere with great particularity.

"The Germans, besides sundry other sorts of enriching of their grounds, do instead of dung, cast upon it a kind of pith and fatness of the earth : (Pliny counts it to be first devised in England and France,) called *Marga*, as it were the fat of the earth : but I rather think it to be the invention of the Germans, with whom yet both the name and the use is retained : it is gotten in deep pits, but not alike in all soils. The part of France that lies upon the Maase doth show a sandy kind of marl, differing from the fat marl of Germany, but of the same quality : which carried upon the sea in vessels, is sold as a great merchandize. In some places the scouring of ponds and ditches is used, to the great enriching of the ground, in the mountainy and barren grounds. In some countries they make their land very fruitful with laying on of chalk, (one form of carbonate of lime,) as Pliny testifieth of the Burgundians, and the Gasgoines, and in Germany in our days, this manner of mending of ground is common. But long use of it, in the end brings the ground to be stark nought, whereby the common people have a speech, that ground enriched with chalk makes a rich father, and a beggarly son. A little lower, not far from the Maase, in the country of Lyege, they mend their land with a kind of slate stone, which cast upon the ground doth moulder away, and makes the ground fatter. In Lombardy they like so well the use of ashes, as they esteem it far above any dung, thinking dung not meet to be used for the unwholesomeness thereof. Columella writeth, that his uncle was wont to mend sandy and gravelly grounds with chalk, and chalky and hard grounds with gravel and sand, whereby he had always good income. So do I think that river land by overflowings, and fast ground with mud mingled with sand and gravel, will be made much better."

In tillage, he says, "it is not needful to stir a gravelly and light ground as often as the stiffe ground; yet we find that land, the oftener it is stirred the better it bears." He speaks of the stupid mode adopted by some of the Germans of recent importation in our own country, "who yoke their cattell by the hornes, whereat the oxen are so greeued, that they scarcely race the upper part of the earth." This method is practised to no inconsiderable extent by the descendants of the French on this continent at the present day. The free use of the rake or *harrow* and the *roller*, are strongly urged.

The waxing, waning, and fulling of the moon, and *the course of the wind*, has much to do with the directions in sowing and planting, which are given with great caution. The use of saltpetre with certain kinds of seed when sown, is shown to be a practice of the ancient Greeks. The origin of Trefoil is given from Media, and its antiquity established from Columella, who noting well its great luxuriance, asserts that "an acre will fynde three horses for a yeare."

"*Of hempe*, there two kinds, the male that is without floure and beareth a seed of many colors, and the female that, to recompense her barrenness, hath a white floure. It loveth a rich ground, well dounged and watered, and deep plowed; it is naughty sowing it in rainy weather. The thicker you sow it the tenderer it will be, and therefore some sow it thrice, though some appoint six seeds for a foote. When the seed is ripe it is pulled and made up into bundles, laid in the sun for three or four days, afterwards laid in water with weights upon it for eight or ten days, till the rhind wax loose, then dried in the sun, then broken in the brake, then combed."

The crops cultivated are similar to our modern ones, with the addition of several strange names; "wheat, rye, barley, millet, zea, Far. adoreum, oats, buck or beech-wheat, panicle, kyse, sesamun, pulse, beans, pease, lyntels, chyche, cicercula, tares, lupins, fenngreche, medica (a trefoil), cytisus, sperie," &c., &c.

Oats, though esteemed nought by Virgil, and weeds by Pliny, were even then much used in France for provender, and in Germany for food. In England, too, they were used occasionally for both food and drink, and Theophrastus says "it is not daungerous in the choyce of its grounde, but groweth like a good fellow in every place where no seed else will grow."

The cradle for cutting grain even then, was used to some extent, and the reaping machine was in successful operation, for Palladius describes a "shorter way to be doone with the oxe that shall in short time cut down all that groweth; woont to be used in Fraunce. The devise was a lowe kind of carre with a couple of wheeles, and the frunt armed with sharpe sickles which trick forced by the beaste in the corne, did cut downe al before it." In hot weather he recommends plowing all night, thereby turning in all the dew and avoiding the heat of the sun. We object to this for man or beast, but would substitute from daylight till 10 A. M., and from 3 or 4 P. M., till twilight again.

Roots scarcely entered into their estimate of crops. The introduction of these into modern agriculture, has probably doubled the crops of Europe, within forty years, where cultivated.

For the Flower Garden, a great variety of minute directions are given, and it must be allowed if the plan detailed by our author was fully carried out, all the comforts, delicacies, and luxuries of vegetables, fruits, and flowers were enjoyed by the better class of those times, equally with the most tasteful and luxurious of the moderns.

The remedies for caterpillars, insects &c., are similar to several employed by ourselves, mixed up with many absurdities. Burning brimstone and stalks of garlick, juice of wormwood, lime and soot were preventives then and are so now.

The orchard was ordered with great particularity and care. The fanciful notion of sympathy, or "a naturall freendshippe and loue betwixt certayne trees," and their antipathies are particularly noted, as well as all the modes of propogating, budding, grafting, and cultivating are specified—all fruits have their due share of attention and are specified with sufficient minuteness, but the *vine* seems to claim the most particular attention. Sixteen close pages, show the estimation in which it was held in England, and this long description seemed requisite to give to this fruitful subject, its lawful honors, for even there it was esteemed worthy "among all trees and plants to challenge, by good rights, the Souereigntie." Noah has the credit of its discovery and its importance in all time since, is fully chronicled; and Cato, Varro, and Columella are cited as raising 700 and "Seneca 1000 gallondes of wine on an acre." The custom of manuring vineyards with the trimmings of the vines, is shown to be at least as old as our author, and may have descended from the remotest antiquity. The lighter kinds of land is preferred for it, as

"Dame Ceres ioyes in heauie ground,
And Bacchus in the light;"

the flint, by general consent, being considered a friend to the vine.

The forest trees, in all their useful, though in Europe, limited variety, are enumerated, with their uses, modes of planting, and the beauty and general utility derivable therefrom. These complete the second book on gardening and trees; the first, being occupied entirely with general principles, pastures, arable ground and tillage.

The 3rd. Book "entreatying of Cattell" begins with *the horse*, which is minutely described, the result of which is, that "the hole bodie should be so framed, as it bee large, hye, liuely, sprited and well trussed. Some horsemen would have their horse limmed after the proporcion of divers beasts, as to have the head and leggs of a stagge, the eares and tayle of a fox, the neck of a swanne, the brest of a Lion, the buttocks of a femayle, and the feete of an asse. His tayle would bee longe, bristly and curled, the length whereof, is not only a beautie, but also a great commoditie to hym to beat away flies; yet some delight to have them curtailed, specially if they bee broad buttockt."

In soils and plants and trees, the lore and practice of ancient times, seems not to have partaken so much of the marvellous, yet through the whole of their ideas their was manifest a strain of the fanciful, of which the most illiterate of modern times are hardly susceptible. But no sooner did they come in contact with the things of life, than a strange phantasie seemed to possess them. All was magic and witchcraft, so far as they were concerned. A spell seemed to hang over their very existence, and sprites, fairies and hobgoblins ruled the whole race of animated existence. Witness the "conceauing of the *mare* with her own feruent desire, and bringing foorth after the manner of byrdes. In Spaine, *mares* have conceived with the wind" (of which Addison makes notable mention, in describing the farthingales of the modish cockneyess, not dissimilar to the bustles of the present day,) "and brought up their colts, but *the colts have not lived above three yeres*," For choice and novel directions for controlling the sex of the progeny, and its indication in its incipiency, we must refer the curious to the work itself.

The *Asse* has his due share of attention, and the habits of this dandy beast seem not to have altered much since the days of his ancestors. His daintiness of the water, like that of the feline tribe, has an ample cause assigned. "She dare in no wise come nere it, no not to touch it with her foote, neither will she drinke in any strange water, where she may goe and stand drie foote. In drinking they scarcely touch the water with their lippes, for feare of wetting their goodly eares, as is thought. They are troubled with fearful dreames in their sleepe, [we should judge as much from the infernal braying they frequently make when waking up;] and delight to be lodged in wide roomes. The Moile will cease striking and kicking if you use to giue them wine;" an economical mode of reforming these amiable hybrids, which if generally adopted, our western breeders will see the necessity of increasing their vineyards in proportion to their stock.

"The *Camell*, though regarding his blood, and lying neither with sister or mother; yet of the female camell and the wild boar of Bactria is engendered the camell with twoo roomps upon the backe."

The dignity of the ancient family of the Bovine race, is specially vindicated by our author. "Hesiodus the grauest authour of our profession, affirmeth that the famelie doeth consist of the housebande, the wife and the Oxe. Aristotle in his pollitickes and economickes saies, he was alwaies in honour and estimation, and Italie first took its name from the beautie and fertilitie of heifars, whence Hercules pursued the noble bull Italus. This is the cheefe companion of man in his labours, and the trustiest seruant of the Goddess Ceres. Moreover of a rotten steere are engendered the sweet bees the mothers of honie."

Forms. "The most comely, have these properties; large, well knit and sound lims, a long, a large and deepe side bodie, blacke horned, though in color there is no great matter." Varros description is not bad for a modern ox—"broad forehead, great eyed and black, his chawes to be large and wide, his lippes blackish, his ears rough and hairy, his neck well brauned and thick, his dewlaps large and hanging doune to his knees, his shoulders broad, *his hide not hard and stubborn in feeling, his belly deep, his legs well set and full of sinews and straight, rather short than long, the better to sustain the weight of his body, his knees straight and great, his feet one far from the other, not broad or turning in, but easily spreading, the hair of all his body thick and short,* his tail long and big haired

Wine is reccommended for taming the steers, "and the oxen waxe sooner fatte by washing them with warm water, and by cutting their skinnes and blowing winde into their bellies with a reede." Great cleanliness and care of working cattle is properly enjoined, and a caution insisted on to remove the diseased animal from the herd, "lest he infect the whole flock and you impute that to the wrath of God, as many fools doe, which happeneth through your owne beastlinesse." Twenty pages are devoted to the description and diseases of this useful beast, though we opine our readers would thank us little for details of remedies as outré as then practised, and here we must conclude our present notice of our very pleasant and profitable colloquist, with the hope of renewing his acquaintance in our next.

EDITOR'S TABLE.

Fair of the American Institute.—We trust our readers will not forget the splendid fair that is to be held by this friend to American industry, during the present month. We give the order of arrangements below, and call on all the lovers of fine stock, fine vegetable products, splendid American manufactures, and brilliant speeches, not to let this opportunity pass unimproved, for gratifying their just and patriotic taste in such matters.

Arrangements.—Friday and Saturday, October 7th and 8th, Receiving Days for Contributors for Premiums.

Monday, October 10th, Garden will open to the public at 12 M. At half past 7 o'clock, P. M. an Address in the Saloon by one of the Vice-Presidents of the Institute.

Tuesday, October 11th, an Address at half past 7 o'clock, in the Saloon, by William B. McClay, Esq.

Wednesday, October 12th, Ploughing Match and testing of Ploughs, at East New-York. An Address from the Rev. J. O. Choules, a member of the Board of Agriculture. Display of Fireworks from the Garden.

Thursday, October 13th, Convention of the friends of Home Industry at the New York Lyceum of Natural History, opposite Niblo's Garden, 11 A. M.

Friday, October 14th, Convention continued.

Monday, October 17th, Entries of Cattle at the Repository, rear of City Hall in the Park.

Tuesday, October 18th, making Catalogue of Cattle—Nautical Exhibition.

Wednesday, October 19th, Cattle Exhibition—they must be on the ground by 9 A. M.—Examination by Judges.

Thursday, October 20th, last day of Cattle Exhibition—Anniversary Address by the Hon. H. G. O. Colby, of New Bedford, Mass., half past 7 P. M. An Ode composed for the occasion, will be sung by the Tabernacle Choir of Music.

Friday, October 21st, Sale of Cattle at 10 A. M.

Saturday, October 22d, Closing Address and Award of Premiums announced.—Band of Music.

N. B. Several other Addresses will be delivered during the Fair in the Saloon, commencing at half past 7 o'clock, P. M.

Directory for Fairs in 1842.

STATE AGRICULTURAL SOCIETIES.

Rhode Island—Fair at Pawtuxet, Sept. 28.

Alabama—Henry W. Collier, Pres't.; M. D. J. Slade, Cor. Sec'ry.

NEW-YORK COUNTY SOCIETIES.

Cayuga—J. M. Sherwood, Pres't; W. Richardson, Sec'ry; Fair at Auburn Oct. 12, 13.

Columbia—Wm. B. Ludlow, Pres't; J. McGifford, Sec'ry. Fair at Hudson, Oct. 11.

Chemung—A. J. Wynkoop, Cor. Sec'ry. Fair at Fairport, Oct. 19.

Clinton—Z. C. Platt, Pres't; Jacob H. Holt, Cor. Sec'ry.

Cortland—D. Hibbard, Pres't; A. Rice, Cor. Sec'ry. Fair at Homer, Oct. 5.

Dutchess—Geo. Kneeland, Sec'ry. Fair at Washington, Oct. 5.

Greene—A. Van Bergen, Pres't; A. Marks, Sec'ry.

Jefferson—A. Ely, Sec'ry; Fair at Watertown, Sept. 15.

Montgomery—Fair Oct. 11, 12.

Niagara—Wm. A. Townsend, Pres't; Wm. Parsons, Cor. Sec'ry. Fair at Lockport, Oct. 6, 7.

Oswego—Orville Robinson, Pres't: S. Y. Baldwin, Cor. Sec'ry. Fair at Mexico, Oct. 5.

Queens—E. Lawrence, Pres't; A. G. Carll, Cor. Sec'ry.

Saratoga—H. Gardner, Pres't: J. A. Corey, Sec'ry. Fair at Ballston Oct. 4.

Steuben—Z. A. Leland, Bath, Cor. Sec'ry.

St. Lawrence—J. S. Russell, Cor. Sec'ry. Fair at Canton, Sept. 14.

Washington—J. Savage, Pres't; Asa Fitch, Jr. Sec'ry. Fair at Salem, Oct. 11.

CONNECTICUT SOCIETIES.

Hartford—S. Olmsted, Pres't; N. Johnson, Cor. Sec'ry. Fair at Hartford, Oct. 4, 5, 6. Cattle Show and Ploughing Match Oct. 7.

Litchfield—Fair at Litchfield, Sept. 28, 29.

Enfield, Somers, Ellington and East Windsor—B. Pinney, Pres't; S. Bartlett, Sec'ry. Fair at Enfield, Oct. 12.

MASSACHUSETTS COUNTY SOCIETIES.

Housatonic—Fair at Great Barrington, Sept. 28, 29.

Essex—Fair at Andover, Sept. 28.

MARYLAND.

Prince George's Society—Annual meetings held in Upper Marlborough, in November. Governor Sprigg, President; R. Bowie, Sec'y; T. F. Bowie, Cor. Sec'y. Their address Upper Marlborough.

MICHIGAN COUNTY SOCIETIES.

Manroe—Fair at Monroe, Sept. 28.

OHIO COUNTY SOCIETIES.

Seneca—R. G. Pennington, Sec'y. Fair at Tiffin, in October.

Hamilton—J. Mahard, President. Fair at Carthage, Sept. 14, 15.

ILLINOIS SOCIETIES.

Farmer's Ag. Society of the Upper Mississippi—T. C. Legate, President; T. Melville, Sec'y. Fair at Galena, Oct. 5, 6.

Union Society—J. T. Gifford, Pres't; J. S. Wright, Sec'y. Fair at Aurora, Oct. 19.

MISSOURI COUNTY SOCIETIES.

St. Louis—Wm. C. Carr, St. Louis, Pres't; P. Gould, St. Louis, Sec'y. Fair at St. Louis, Oct. 18.

CANADA SOCIETIES.

Gore—Fair at Dundas, Oct. 13.

Northumberland—Fair at Grafton, Oct. 12.

Durham—Fair at Bowmanville, Oct. 18.

Home—E. W. Thompson, President; G. B. Wells, Sec'y. Fair at Toronto, Oct. 12.

DISINTERESTEDNESS—*The South-western Farmer.*—The senior editor of this paper feels under many obligations to the South-western Farmer, published at Raymond, Mississippi, for its article, page 167, on Disinterestedness, and will not only express his own thanks particularly, for it, but add, that it comes in good time for the public. We feel grateful that gentlemen at that distance, with whom we are not only personally unacquainted, but never even had a word of correspondence, should volunteer so handsomely in our defence, and give us credit for entertaining feelings, which notwithstanding the carpings of a few, we trust will ever actuate our movements. We would suggest to such papers as have given currency to impressions of improper motives on the part of others, either by their correspondents or otherwise, whether they had not better copy the article for the benefit of some of their correspondents.

The S. W. Far., is a handsome quarto of 8 pages, published weekly at three dollars per annum, edited by Messrs. N. G. Forth and John Jenkins, and is one of the most spirited, varied, and ably edited agricultural papers in the United states. A Mississippian, travelling in Egypt, is giving a very interesting series of letters upon the scenery and agriculture of the Nile. We trust that the day will soon arrive, when agricultural travels abroad will be sought for and read with avidity, and take the place of those that have too frequently flooded the world about dancing girls, stage players, and the trash of mawkish romantic literature.

☞ Charles Starr, Jr., of Mendham, Morris Co. N. Jersey, has recently purchased several of the imported Berkshires, selected by A. B. Allen in England last year, and is prepared to fill orders, on moderate terms, for young and grown animals. The stock is so well known and so highly appreciated, that it is deemed unnecessary to give a description of it here. This purchase has been made expressly to accommodate the numerous orders from the East and South, for this valuable stock, which from his farm can be supplied at all seasons of the year, and with much less risk of transportation, than from their former location. We refer our Southern friends to Mr. Starr, with the fullest confidence that their orders will be promptly and satisfactorily attended to.

☞ William K. Vail is acting agent for the American Agriculturist, and is authorised personally, and by proxy to receive subscriptions.

ERRATA.

On page 162, for Barrington read Barmington.
" 163, for Norfolk Hall read Newby Hall.
" 163, for Dairy bull read Daisy bull.
" 164, for Dairy bull read Daisy bull.
" 164, for deep milking read deep milkers.
" 165, for Hunworth read Hurworth.
" 167, for "digestibility," read digestive power.
167, 2d column, after "17 bushels," read of rye.

The description, page 165, through a misprint, gives an erroneous impression of Mr. Bates' soil, for it is much more adhesive and clayey than the soil of Western New York.

"Ella" requests us to correct the word "recipe" when it occurs in her communication in our 5th No. It was correctly written in her manuscript "receipt."

Works pertaining to Agriculture for sale by Saxton & Miles, 205 Broadway.

Johnson's Elements of Agricultural Chemistry and Geology, 50 cents; Do. do. 1 vol. 12mo. $1; Gray's Botanical Text Book, $1 50; Lindley's Horticulture, $1 25; Gray's Agricultural Chemistry, 75 cents; Downing's Landscape Gardening, $3 50; do. Cottage Residences, $2 50; Leibig's Organic Chemistry, &c. &c.

Orders from any part of the United States punctually attended to, at the **cheap cash book store, 205 Broadway.**

Wheat Sheaf FARM on Staten Island, for sale.

A recent domestic bereavement has induced the Undersigned to offer his residence, on Staten Island, for sale. It is situated midway of the outer bay, on the sea shore, eight miles from the quarantine Ferry, three from that of Rossville, and equi-distant from two others, Seguine's Landing and Port Richmond.

The condition of the Farm—the extent, value, and practical usefulness of the improvements and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upwards, each including an appropriate allotment of woodland—each division offering a moderately elevated building location. The condition of the soil can at this time be best appreciated, as its harvest is heavy and now gathering. Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product. W. A. SEELY, 218 Fulton-st. N. York.

ISABELLA GRAPE VINES,

Of proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their locality is not too far north.) All communications, post paid, addressed to R. T. UNDERHILL, M. D. 400 Broadway, N. Y., will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grape vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, all the Western, Middle and Southern States. October. 1842

TWO MERINO BUCKS WANTED, of good size, fine fleece, and unexceptionable pedigree. Enquire of the editors of this paper, at 205 Broadway, New York.

REVIEW OF THE MARKET.

Prices Current in New-York, October 1, 1842.

ASHES, Pots, per 100 lb.	$5 50	to 5 62
Pearls. do.	5 75	5 88
BEESWAX, Yellow, per lb.	28	30
COTTON, Louisiana, do.	6	10½
Upland, do.	5¾	9
Florida, do.	5	9
Alabama, do.	6	10½
FEATHERS, American, live, per lb.	25	30
FLAX, American, per lb.	8	9
FLOUR, Northern and Western, via Erie Canal, per bbl.	4 37	4 50
do. via N. Orleans,	4 25	4 37
Southern, per bbl.	4 62	4 75
RYE, per bbl.	3	3 50
MEAL, Corn, per bbl.	2 88	3 00
do. per hhd.	13 25	13 50
WHEAT, Western, per bushel,	80	98
Southern, do.	70	80
RYE, Northern, per bushel,	60	61
CORN, do. do.	55	58
Southern, do.	52	54
BARLEY, per bushel,	53	56
OATS, Northern, per bushel,	27	28
Southern, do.	22	25
PEAS, Field, do.	91	1 12
BEANS, White, per bushel,	1 20	1 40
CLOVER SEED, per lb.	8	8½
TIMOTHY SEED, per tierce of 7 bu.	10 00	14 00
FLAX SEED, rough, do. do.	10 00	10 50
clean, do. do.	12 00	12 50
RICE, per 100 lb.	2 25	2 87
HEMP, Russia, per ton,	210 00	215 00
American, do.	—	—
HOPS, first sort, per lb.	11	14
LEAD, Pig, per lb.	3¼	3½
Sheet and Bar, per lb.	4½	5
OIL, Linseed, American, per gal.	91	95
PLASTER OF PARIS, first quality, per ton,	2 25	2 75
unground do.	1 75	2 00
BEEF Mess, per bbl.	7 25	8 00
Prime, do.	2 50	3 00
Cargo, do.	1 75	2 00
PORK, Mess, do.	8 25	9 00
Prime, do.	5 00	6 25
LARD, per lb.	7	8
BUTTER, best Table, per lb.	16	19
Western, good, per lb.	10	13
Shipping, do.	6	8
CHEESE, in boxes and casks, per lb.	5	6½
HAMS, Smoked, per lb.	7	9
Pickled, do.	5	6
Shoulders, smoked.	4	5
BEEF, Smoked, do.	6	7½
SALT, Liverpool, ground, sack	1 20	1 25
do. fine, do.	1 55	1 60
SUGAR, New Orleans, per lb.	4	6
TOBACCO, Virginia, do.	3	6
Kentucky, do.	2½	6
TALLOW, American, do.	6½	8
WOOL, American Saxony fleece, per lb.	32	35
Full blood Merino do. do.	28	30
Half to three-fourths do. do.	24	26
Native to half do. do.	18	20
SHEEP PELTS, each,	20	50
HAY, new, per 100lb.	50	62
old do.	62	75
POTATOES, new, per bushel,	18	25
EGGS, per 100,	1 00	105

REMARKS, Oct. 1.—It will be seen by our quotations that a large reduction in the price of Wheat and Flour has been experienced since our last, as was then anticipated, and we know of no causes to carry prices above these depressed rates for the present. The tariff which has passed since our last went to press, has not been felt in any *upward* tendency of Agricultural products as yet, though it has not been without its effect in arresting the downward course of prices, and without it, it is impossible to say how far they would have receded with the immense supplies on hand, and the non-consumers which would have been daily added to the army of producers, from the ranks of the unemployed artisans and manufacturers. As these last, however, have been called back in great numbers to their former occupations, and the course of things will be the constant augmentation of the consuming classes, we may confidently anticipate ere long, a gradual approximation to the former satisfactory prices of agricultural products. There is but a limited demand from abroad for any portion of our surplus. No change of consequence has occurred in other articles than grain since our last.

CATTLE MARKET, Sept. 26.—1150 Cattle in market; 2500 Sheep and Lambs; and 40 Cows and Calves.

PRICES were extremely low, $4 to $4,50 being the range for average *Beef*, though for choice animals the rate occasionally went up to $6 *Cowes and Calves* sold from $20 to $25, sometimes as high as $38. *Sheep* ranged from $1,50 to $4,00 according to quality. *Lambs* from $1 to $2,75.

☞ In consequence of the removal of the former publisher of this paper to England, it will hereafter be published by Messrs. SAXTON and MILES, booksellers and publishers generally, at No. 205 Broadway. All letters on business relating to the Am. Agriculturist, should be addressed, *post-paid*, to them.

SAXTON & MILES,
PUBLISHERS AND BOOKSELLERS,
205 BROADWAY—NEW YORK.

Wholesale and Retail Dealers in Theological, Classical Agricultural, Health, Miscellaneous and School Book.

S. & M. intend keeping a full supply of all works relating to Agriculture and its improvement, and to the sciences connected therewith; and to make their store a DEPOT, where the FARMER ESPECIALLY can find any thing he may wish, whether pertaining to his business or otherwise; and also where he can send his orders for books, with the confidence that they will be promptly and faithfully attended to.

THE HEALTH ALMANAC FOR THE YEAR 1843.—*Devoted to the Law which reglate the ai mal, criginally deigned for the Spirit of Man—By a* VEGETABLE EATER.

CONTENTS.—Equinoxes and Solstices..Eclipses in the Year 1843—Calendar, with Maxims on Health, Law, Policy and Mind—Agricultural Statistics of the U. S. by Hon. H. L Elsworth—Mastication—Life—Milk—Nothing made in vain—The Stomach and Internal Canal—Worms in Living Creatures—On Swine's Flesh as food—Original Food of Man—Relation of Man and Wife—Relation of Parent and Child—Preparation of Bread Stuff—Bread Making—Head Ache—Life and Death—Formation of the Teeth—Bankrupts—Eating—Query answered—Disease and Pani—Bathing—Sleep—Dreaming—General Differences of the Sexes of the Animni and Vegetable Kingdom—Rates of Postage, &c.

Published by SAXTON & MILES, 205 Broadway—price 6 cents single copy; 37 1-2 cents per doz.; $2 50 per 100; 20 dols. per 1000

R. H. HENDRICKSON,
MIDDLETOWN, BUTLER COUNTY, OHIO,

Is now prepared to fill orders for thorough-bred Berkshire Pigs, from the late imported boars Windsor Castle and Earl Craven, and twenty choice sows purchased of A. B. Allen, a part of his recent importation. Pigs in pairs from this superior stock will be furnished substantially caged and delivered on the canal at Middletown, or on board steamboat at Cincinnati, from $30 to $50, according to age and quality. Orders accompanied with cash, will always secure the preference.

ALSO—Pigs bred from the superb boar Kenilworth, of a stock of the largest and finest kinds of white hogs in England, also imported by Mr. Allen last October, crossed on the splendid large white Miami hogs of this country. The Miamis have been long noted for their large sizes. Animals of this breed have occasionally come up to the enormous weights of 1200 and 1400 lbs., and it is believed that the cross of Kenilworth on them, will easily attain the weights of 700 to 1000 lbs. at 18 months and two years old, if well fatted. Pigs of this cross $25 per pair, caged and delivered as above. Refer to the editors of this paper.

Contents of this Number.—Editorial.

Prizes awarded by the N. Y. State Agricultural Fair, September, 1842 193
Description and remarks on the above Fair 195
Tour in England No. 7, Manures, Sub-soil Plows, and Farming generally 198
Practical Farming.—Wheat-sheaf Farm, 201
Raising Silk, Morus Multicaulis, 205
Silk Worms, preservation of eggs, 206
Hatching-- Cocoonery 207
Water Rotting Hemp, 208
White Berkshire, Size of South Down Sheep, 210
Annual Fair of the Royal Agricultural Society, England—Original Correspondence---C. Starr on Woburn Pigs, 211
Suggestions for Agricultural writers, Whittington Wheat, &c. 212
Mississippi, its Soils, Climate, and Products, 214
Enquiry for Jacks—To Correspondents—Autumn, 217

Selections.

Culture of Cotton—Vegetable Compass, 218
Corn stalk Sugar—The Bee, 219

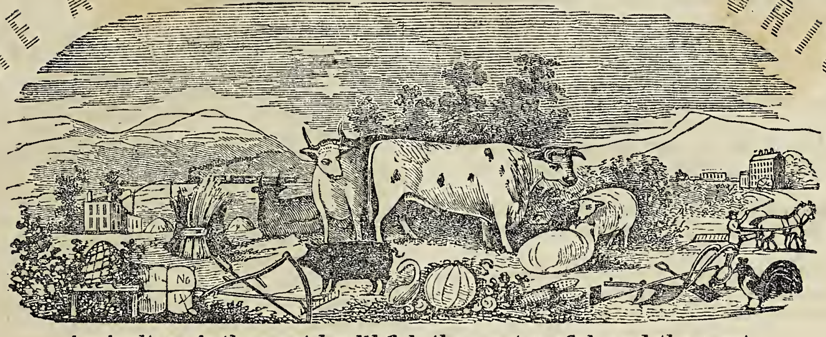
Review of Books.

Old Agricultural writers. Barnabe Googe, Esq. 220

Editor's Table.

Fair of the American Institute—Directory for Fairs, 222
S. W. Farmer—Purchase of Berkshires, Agents, Errata, Advertisements, 223

THE AMERICAN AGRICULTURIST.



Agriculture is the most healthful, the most useful, and the most noble employment of Man.--*Washington.*

Vol. I. **New-York, November, 1842.** **No. 8.**

A. B. Allen, and R. L. Allen, Editors. Saxton & Miles, Publishers, 205 Broadway.

" THE AMERICAN AGRICULTURIST" will be published Monthly, each number to contain thirty two pages royal octavo.

Terms.--One Dollar per annum, payable strictly in advance.

Six Copies will be sent for $5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside.

Thirteen Copies will be sent for $10, if remitted as above. Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, post paid, No. 205 Broadway, New-York.

☞ **Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

PREMIUMS AWARDED BY THE AMERICAN INSTIUTE, at their Fifteenth Annual Fair, held at the corner of Broadway and Fourteenth street, 19th and 20th October, 1842.

IMPROVED BREEDS OF CATTLE.

Bulls, 2 years old and upwards.

To E. P. Prentice, Albany, for best bull, Fairfax—Silver Cup.

Henry Watson, Conn. 2d do. Prince Hal—Silv. medal.

Bulls, 1 year old and upwards.

To Thomas Addis Emmet, N. York, best bull, Sir Temple—Silver Cup.

S. W. West, do. 2d do. Prince of Fulton—Silv. medal.

Bull Calves.

To E. P. Prentice, Albany, best calf, Cato—Silver Cup.

Wm. Gibbons, N. Jersey, 2d do. Avalon—Silv. medal.

Cows, 3 years old and upwards.

E P Prentice, Albany, best cow, Matilda—Silver cup.

Do do 2d do Daisy—Silver medal.

Heifers, 1 year old and upwards.

To J A Pool, N. J. best heifer, Alderney—Sil. cup.

Do. do. 2d do. Louisa—Silv. medal.

Heifer Calves.

To Effingham Lawrence, Flushing, L. I. best calf, Sally—Silver cup.

W Pirnie, Westchester Co. 2d do. Victoria—Silv. medal.

Extra Stock.

To Cyrus P. Smith, Brooklyn, for his imported Durham Cow, possessing extraordinary milking qualities—Silver medal.

Native Stock—*Bulls, 2 years old and upwards.*

To Jas. Ramsey, Brooklyn, best bull—Silver Cup.

Bull Calves.

B. Brockett, Connecticut, bull calf—Silver medal.

Cows 3 years old and upwards.

Angus McDuffy, Sing Sing, best cow—Silver cup.

Josiah Pirnie, Rye, 2d do.—Silver medal.

George D. Small, Newark, N. J. 3d do.—Diploma.

Working Oxen.

J Todd, North Haven, Conn. best pair—Silver cup.

John B. Davis, Derby, do. 2d do.—Silver cup.

John Hubbard, Guilford, do. 3d do.—Silver cup.

Do. do. do. a pair of fine steers—Silv. medal.

W. K. Townsend, East Haven, do. a pair 3 year old working bulls—Silver medal.

Fat Cattle.

Davis, Roseman & Co. N Y best fat Durham heifer—Gold medal.

P N Rust, Syracuse, 2d do Empire Ox—Silv. medal.

Davis, Roseman & Co. N Y 3d do Washington—Dip.

Horses—*Stallions.*

John R Sneidecker, Jamaica, L I, best, Abdallah—Silver cup.

John A Pool, N Jersey, 2d do Raritan—Silver medal.

Brood Mares.

H Watson, East Windsor, Conn. best, Betsy Wilson—Silver cup.

E Lawrence, Flushing, 2d do Iodine—Silver medal.

Colts.

G W Patchen, Brooklyn, best, Logan—Silver cup.

J M Kidd, Orange Co. 2d do Walden—Diploma.

John Wilde, N Jersey, best filly—Diploma.

Jacks.

John A Pool, N Jersey, best, Don Juan—Silver cup.

Sheep—*Long Wool Bucks.*

W Pirnie, Rye, best, Bakewell—Silver cup.

C Blackburn, Bedford, L I 2d do—Silver medal.

Long Wool Ewes.

C Blackburn, Bedford, best, Bakewell—Silver cup.
W Pirnie, Rye, 2d do do—Silver medal.

Long Wool Lambs.

C Blackburn, Bedford, best, Bakewell—Silver medal.

Middle Wool Bucks.

O. Elliott, Middletown, N J best S Down—Silver cup.
Dr. Cutter, Shrewsbury, N J 2d do—Silver medal.

Middle Wool Ewes.

Dr. Cutter, Shrewsbury, best, S Down—Silver cup.

Middle Wool Lambs.

Dr. Cutter, Shrewsbury, best, S Down—Silver medal.

SWINE—*Boars.*

H W Tibbets, Yonkers, best Columbia breed—Sil. cup.
Charles Starr, Jr, N Jersey, 2d, Berkshire—Diploma.

Sows.

Charles Starr, Jr, N Jersey, best, Berkshire—Silv. cup.
W Love, Bloomingdale, 2d do Hampshire—Diploma.

Extra Stock.

H W Tibbets, Yonkers, best shoat—Diploma.
R F Aitken, 4 fat hogs—Diploma.
James Burling, Berkshire sow—Diploma.

POULTRY.

S B Townsend, Newtown, L I, superior specimens of Bremen geese and Muscovy ducks—Diploma.

DAIRY PRODUCTS—*Butter.*

S Yates, Palatine, N Y best—Silver cup.
John A Smith, Orange Co. 2d do—Diploma.
H W Strong, do 3d do—Diploma.

Cheese.

S Penny, N York, best—Silver cup.
A B Ludlam, do 2d do—Diploma.

PLOWS AND PLOWING.

Minor, Horton, & Co, Peekskill, best plow—Sil. cup.
F L Wyckoff, Flatbush, L I 2d do—Silver medal.
Mooers & Slater, Ithaca, best plowing—Silver cup.
[This was done with their side-hill plow, to which was awarded the gold medal from the Institute last year.]
F L Wyckoff, Flatbush, 2d do—Silver medal.
Minor & Horton, Peekskill, 3d do—Diploma.

FIELD CROPS.

L Wyckoff, Bushwick, L I best field of cabbages, 20 acres—Silver cup.
Garret Vreeland, N Jersey, 2d do—Diploma.
F J Betts, Newburg, best field of corn—Silver medal.
R F Carman, Fort Washington, N Y 2d do—Diploma.
F J Betts, Newburg, best field of oats—Silver medal.

FRUIT.

W P Buel, Albany, 62 kinds of apples—Silver medal.
R A Cornwall, 49 Dey street, superior apples—1 vol Am. Orchardist.
R L Pell, Pelham, superior winter do—Bridgeman's Gard. Ass't.
Peter A. Ross, 225 Thompson-st. do do—U S Farmer.
S G Carpenter, 476 Bowery do do—Cultivator.
Dr. R F Underhill, Croton Point, superior pippins—Bridgman's Gard. Asst.
A J Downing & Co. 30 varieties of pears and 50 of apples—Silver medal.
J P Mantel, 62 do and 10 do—Silver medal.
W Reed, corner 34th-st and 4th avenue, superior table and winter pears—Am. Orchardist.
W Mosely, New Haven, Conn. specimens of winter pears—Bridgman's Gard. Asst.
Judge T Dickerson, Paterson, N J, Sickle pears—Am. Orchardist.
R L Pell, Pelham, choice quinces—Am. Orchardist.
Dr. R F Underhill, Croton Point, do—Gray's Agriculture.
Thos. H. Perkins, Boston Mass., 11 choice varieties of foreign grapes—Silver medal.
Dr. Underhill, Croton Point, Isabella and Catawba grapes—Johnson's Agricultural Chemistry.
Matthew Antonides, Brooklyn, Isabella grapes—Gray's Agriculture.
John P. Haff, Fort Lee, N. J., Field grapes—U. S. Far.
Ed Classen, 219 Delancey street, Sweet Water grapes—Manning on Fruits.
Jas W Burtis, Brooklyn, choice grapes—Am Orchardist
Barnum Blake, Franklin, Mass, cultivated cranberries—American Agriculturist.

AGRICULTURAL PRODUCTIONS.

Geo Chesterman, Harlem, 40 ears white corn—3 vols Cultivator.
J Van Valkenburg, Harlem, 40 ears yellow corn—3 vols Gen Farmer.
Wm P Buel, Albany, specimens of Dutton do—Dip.
N N Wyckoff, Bushwick, L I, Tuscarora do—Cultiv.
Grant Thorburn, Astoria, L I, Chinese do—Diploma.
E R James, Poughkeepsie, 1 bushel White flint wheat—Diploma.
General R Harman, Wheatland, 11 beautiful varieties of wheat.—Medal.
J Van Winkle, Bergen, N J, Egyptian wheat—Dip.
J De Peyster, Flatbush, L I, do Diploma.
Holt & Owen, 209 Front street, 1 bushel superior buckwheat—Buel's Far. Companion.
D H A Field, 3d Avenue, 1 bushel superior oats—3 vols Cultivator.

FLOWERS.

Thirty-one awards were made for superior specimens of flowers sent to the garden during the Fair.

VEGETABLES.

John Bakewell, 61st street, for the best and greatest variety of culinary vegetables—Silver medal.
J James, Hurl Gate, best and greatest variety, cultivated as a field crop—Silver medal.
R F Carman, Fort Washington, Sugar beets—U S Far.
M Hughes, Long Island, mangold wurzel—Gray's Agri.
J C Thompson, Staten Island, Cape broccoli—Bridgeman's Assistant.
Daniel C Folk, Newtown, Drumhead cabbage—Downing's Rural Architecture.
John E Ross, 225 Thompson street, Drumhead cabbage—Diploma.
S A Willoughby, Brooklyn, Celery, &c—Johnston's Agricultural Chemistry.
Thos Addis Emmett, 79th street, Egg plants, &c—Bridgeman's Assistant.
Jas Wiggins, Corporation garden, Blackwell's Island, white and silver skin onions—Buel's Far. Compan.
Wm Van Wyck, Fishkill, N Y, red and silver skin onions—American Agriculturist.
John Bryel, Jersey City, superior culinary vegetables—Gray's Agriculture.
T B Wakeman, Bergen, N J, best table potatoes—Manning on Fruits.
H W Tibbits, Yonkers, choice do—Johnstone's Agri. Chemistry.
N B Smith, Woodbury, Conn, superior do—Cultivator.
S B Townsend, Newtown, L I, choice do and turnips—Gray's Agriculture.
R N Wyckoff, Bushwick, L I, superior garden products—Bridgeman's Assistant.
N Wyckoff, Bushwick, L I, do do—Buel's Com.
Edwin Lord, Staten Island, pumpkins and squashes—Bridgman's Assistant.
Wm Golding, 29th street, superior pumpkins—Am. Agriculturist.
Jas Foulk, Hurl Gate, extra large do—Davis' Muel Manual.
Henry Townsend, Hyde Park, do do U S Farmer.

Wm H Hughes, Gowanus, L I, superior Cocoanut squashes, &c—American Agriculturist.
Will Covert, L I, superior garden products—U S Far.
E J Swords, Bloomingdale, Smyrna squashes—Johnstone's Agricultural Chemistry.
R L Pell, Pelham, superior culinary vegetables—Dana's Muck Manual.
John P Haff, Fort Lee, N J, numerous varieties of garden products—American Agriculturist.
Henry Delafield, superior culinary vegetables—Bridgeman's Assistant.
D N Demarest, N J. 2 Smyrna squashes and a case of eggs—Dana's Muck Manual.
S Courter, 28 Barrow street, 1 large pumpkin—Dip.
J Stowes, N Jersey, superior celery—Diploma.

Raw and Manufactured SILK.

B & W H Jones, Manchester, Conn, best sewing silk —Diploma. (Silver medal having been before awarded.)
E Golding, Mansfield Centre, Conn, 2d best do—Dip.
J Ryle, Paterson, N J, best ball twist, sewing silk, &c —Silver medal.
Wm B Fink, Windham, Conn, sewing silk—Diploma.
John McRae, 109 Canal street, silk cords, gimps, and binding—Diploma.
Eleanor M La Fetra, N Jersey, a pair silk stockings—Diploma.
James Hawley, 22d street, harp strings from Am. silk —Diploma.
Salmon Higgins, Ithaca, N Y, best specimen raw silk —Gold medal.
Wm Naylor & Son, 552 Broadway, for silk doubler and winder—Silver medal.

There were some beautiful cocoons and choice silk goods shown, not specified above.

AGRICULTURAL MACHINES AND IMPLEMENTS.

D H Southworth, Newburg, best smut machine—Dip. (Gold medal having been before awarded.)
Leonard Smith, Troy, 2d best do do—Diploma.
Josiah Pratt, Bridgeport, Conn, portable grist-mill—Diploma.
Prentiss & Page, 40 Eldridge street, do do—Diploma.
S W Bullock, Catskill, best cotton press—Diploma.
Wm Bullock Jersey City, combination power press, best for hay—Diploma.
W S Jacks, Catskill, lever railway press 2d best for hay—Diploma.
C T James, Newburyport, Mass, Dynamometer—Dip. (Silver medal before awarded.)
J Williams, Jr, Salem, N Y, Dynamometer—Diploma.
P H Rells, Claverack, N Y, horse power machine—Dip.
Saml Pennock, Chester co, Pa, best drilling machine—Silver medal.
Botts & Burfoot, Richmond Va, best straw and stalk cutters—Silver medal.
John Standish, Fishkill Landing, straw cutter—Dip.
P H Rells, Claverack, N Y, straw cutter—Diploma.
John Moore, 31 Fulton street, best corn sheller—Dip.
Calvin Olds, corn planter—Diploma.
Geo Page, Baltimore, Md, do—Diploma.
Collins & Stone, Ohio, } new cheese
Kennedy & Co, agts, 231 Pearl street, } press—Diploma.
H Branch, Brooklyn, hemp and flax breaker—Diploma.
Valentine Brily, Baltimore, Md, corn and cob crusher —Diploma.
Mark Poole, Brooklyn, 3 garden syringes—Diploma.
H Tower & Co, Milbury Mass, garden hoes—Diploma.
Ed Townley, 75 Thompson street, 9 good bee-hives—Diploma. (Silver medal before awarded.)

Several beautiful specimens of honey were exhibited from Mr. Thompson's hives.

The Agricultural Show was held in the large square, at the corner of Broadway and 14th street. Two long double sheds, extending lengthwise through the area, were appropriated to the cattle, and pens were conveniently arranged on two sides, for the sheep and swine, while ample room was afforded for the exhibition of the horses, and working and fat cattle, in the centre. The number of entries for cattle exceeded 100 horses, mares and colts, 15 or 20; sheep, 50 ; swine, about 60 ; mules, none ; jack, one.

There were several beautiful specimens of short horns, though but a few were shown, and those from a limited number of herds. Mr. Prentice exhibited a few of his choice ones ; also Mr. Poole, Mr. Emmet, and some others. But those on the ground were few, in comparison with the numerous fine specimens that might have been shown ; and we can only hope that such arrangements will be made hereafter, as will call out the choice herds in full force another year. The Durham cow exhibited by Mr. Smith, of Brooklyn, gave in the fall from 33 to 34 1-2 quarts of milk per day, for 20 days in succession, and averaged, from September to July, 27 quarts per day, the last four months of which she was in calf.

Four splendid yoke of working oxen were exhibited from Connecticut, and more beautiful specimens of 4 and 5 year old cattle we never saw. One yoke had the brockle face of the Hereford, with the rapid growth and rangey character of that useful breed, while the others, somewhat more compact, had all the characteristics of the beautiful New-England Devons. The training of these animals was perfect. They would perform their evolutions at the word of command, in a manner that would do credit to a well disciplined corps of men, and shame half the militia of the country ; and their step was quick enough, even with a heavy load, to satisfy any driver who had to walk beside them. If any one doubts the capacity of ox labor for the ordinary purposes of a farm, let him buy a pair or two of these cattle, and he will soon be convinced of the incorrectness of his views. These were delegates from the 513 pairs of working cattle shown at the New Haven County Fair.

The immense ox exhibited at Albany, and belonging to Mr. Rust, was on the ground, and two, out of five, beautiful cattle raised by Mr. Tompkins of New Jersey. The Durham heifer, which took the prize, was the most remarkable animal ever shown in America, and not exceeded, it is presumed, by any ever exhibited in England. We shall give her dimensions in our next. One Hereford only was shown, a bull belonging to Mr. Prentice, and imported by Mr. Sotham. No pure Devon was on the ground. The native cattle, except those above enumerated, were few, and of little pretension, though we noticed some very good crosses. Two Alderny cows were exhibited by Dr. Poole, and a singularly small, delicate, and thin, close haired China cow, with a fine, large, half blood Durham calf by its side.

In horses, the show was very limited. Abdallah, a fine trotting horse, raised on Long Island, was there, and took the first prize, and Dr. Poole's thorough bred horse Raritan, got by Monmouth Eclipse, a fleet, yet substantial horse, well adapted for getting good roadsters out of stocky mares. A stout, black Canadian, after the Norman style, was shown from Orange, N. Jersey, well suited for producing serviceable farm and dray horses. The thorough bred mare, Betsy Wilson, formerly owned by General Emory, of Maryland, but now owned by Mr. Watson, of Conn. was shown, and a good trotting mare, by Mr. Charles Starr, of N. J.

An imported Spanish Jack was exhibited by Dr. Poole, standing fifteen hands high, and so loftily was the bearing of our Assenine hero, that it seemed another fifteen hands to the top of his ears, peering like a pair of minarets from the Gothic structure beneath.

The only sheep exhibited, were the South Downs and Bakewells. There were some beautiful specimens of each of these ; but we cannot forgive our farmers, that they either cannot or will not, exhibit some of the worthy descendants of the original importation of Spanish merinos. These were an invaluable improvement to the United States, and we feel as if they were desecrating, by their neglect, the memory of the illustrious dead, Humphrey and Livingston, who, nearly forty years since, at a great sacrifice of time and money, sent these choice representatives of the woolly tribe to this country. There should be, and can be, better things done for the fine wool interests of the country, and we trust such measures will be taken as to secure a creditable display of these animals, in 1843.

The swine were fairly represented in the Berkshires, Chinas, and their crosses. There were some beautiful specimens of these, and if any one doubts that it is the corn-crib alone that makes the pork, let him scan closely the fine forms, thin hair, mellow elastic handling, the delicate limbs, and quiet countenance, expressive of peace with all the world, exhibited by some of the grunters inside the yard, and their Hammish kindred without, a roaming, restless, thriftless brute, with legs reaching to the back-bone, the bristles of a porcupine, the hide of a rhinoceros, the snout of a plowshare, and all the grim aspect and unthrifty look of a wolf or hyena ; thrice cursing the human race—a curse to their neighbors, a curse to their feeders, and a curse to their eaters.

The show on the whole, though progressive, was not what it should have been, and not what we hope to see it hereafter. There is much fine stock within a reasonable distance of this City, which ought to be exhibited at this Fair, and our own exertions shall not be wanting to call it out another year.

The agricultural implements were limited in number. We shall notice them more particularly in connection with the reports ; some of which we intend to give in our next.

The only field crops entered for prizes, were those enumerated in the list of premiums, which show that exertion alone is wanting to insure excellence in this department.

MANUFACTURED ARTICLES, &c.

The Fair for the exhibition of Manufactured Articles, Fruits, Flowers, and Horticultural Productions, was held in the spacious saloon at Niblo's, and the premises adjoining ; and a rich and beautiful display it was, and well calculated to gratify every truly patriotic feeling, and inspire the fullest confidence, that every rational want, either of necessity, comfort, or luxury, can be adequately supplied by our own citizens, and from our own resources. We cannot, of course, be expected to give more than a passing glance at the things innumerable, that met the eye at every turn, nor would it be proper thus to occupy our sheet, had we room ; yet the temptation is irresistible, to mention a few of the prominent articles, which, we trust, will not be without interest and instruction to most of our readers.

In the room appropriated to cloths, we observed some beautiful specimens of broadcloths, the gold medal for which went to the Middlesex Comp., Lowell, Mass. Rich and varied specimens of fancy cassimeres, fanciful enough, we should judge, to satisfy the most Parisian taste, yet possessing a firmness and durability that marks them as peculiarly American. There were felt beaver cloths, of a thickness and substance equal to a pine clapboard, down to the substantial fabric suited to an outer zero garment. Beautiful, delicate flannels, of a texture finer than we ever noticed in a foreign article, were sent from Ballard, Vale & Co., Andover, Mass., who were justly complimented with the gold medal.

The cotton goods were not numerous, but of great merit. Elegant chintz, tasteful calicos, and beautiful cambrics, each of a substantial kind, leave our ladies, *who wear American hearts*, no excuse for not wearing American clothing with them.

In shoes, and all that pertains to the physical understanding, our artisans seem to have eclipsed themselves; and were some of our dandies in Europe, with a particle of just taste in their noddles, they would im port these articles from the United States, instead of wearing what they now send 4,000 miles to procure.

The Leather department, especially of the fancy kind, was amply represented. Among the numerous varieties, was shown a piece of morocco, which had been taken from the living goat, cleaned, thoroughly tanned, dressed, and from a part of it, a pair of shoes had been made, all within the incredibly short space of 12 hours.

The stuffed birds were there, in all their rich, and gay, and varied plumage; and so natural was their appearance, and so spirited their attitudes, that we almost listened to hear their merry notes.

A case of glass eyes, looked life-like enough to ogle a timid maiden, or frown terrors into a heart of steel. Let those who doubt the effectiveness of this organ alone, gaze on these spectral things, and they will no longer question their power. We have seen many worse in use, and could properly enough advise some, as Lear did Gloster,

> "Get thee *glass eyes,*
> And, like a scurvy politician, *seem*
> To see the things thou dost not."

In hats, we have nothing left to desire. For forty years, at least, we believe America has made as perfect and tasteful beavers as the world affords. The display of this article was numerous and elegant. Some specimens of the Florence braid, and the Tuscan and Amazone bonnets, were not to be surpassed in beauty and durability.

The articles of fancy work, embroidery, and all the et cceteras of female taste and ingenuity, including the half finished *forms* that adorned the transparent cases, whose exquisite mouldings, following the lines of beauty, Burke has so justly delineated, and which a Phidias or Praxitiles might embody in a more durable, but not a more enchanting guise, only served to excite a desire that the remaining outlines had been filled up; but as in these, and the whole class of female adornments, that existed with so much profusion and taste, we are but novices, we must glance over them in silence, and confine ourselves to the more substantial matters of interest.

The display of silver and brittania ware, clocks, chronometers, philosophical and nautical instruments, cutlery of all kinds, buttons, needles, pins, cut glass, &c., leaves us nothing unprovided for in these varieties. More tasteful, accurate, or highly finished articles than those above enumerated, are not to be found, than filled the shelves and show cases. Surely, if we can make what was there shown, we can make anything.

The variety of india rubber articles would seem to be nearly perfected, from the display we saw; and consciences can now, we should think, be made to order elsewhere, than at Washington and our State capitols, Wall street and minor places, and much more Chesterfieldian, combining the elegant and the graceful, with the useful and convenient.

The submerged, and tide, and current water wheels, canal lock gate, iron planing, and screw bolt cutting machines, are all inventions of great merit and utility. There were splendid specimens of rolled brass and copper, and a very successful imitation of Russia sheet iron, and many specimens of boiler iron, not to be exceeded in merit. There were several beautiful samples of solar, coarse, dairy, and table salt, from Syracuse; also fossil salt from the Virginia mines, and beautiful Epsom salts, alum, copperas, and other chemicals; splendid chandeliers, girandoles, astral, oil, camphine, and lard lamps. There was a model of an improvement applied to bridges, by that veteran builder, Capt. Damons, of Northampton, Mass., in which the braces stand only in one direction, and an inverted, added to the usual arch, gives in this combination, a vast additional strength and stability. There was also a new, and it appeared to us a peculiarly safe, yet economical lock, exhibited by Mr. Wilson from the same town. Eli Kirk, 300 Broadway, sent in some beautiful ornaments manufactured from Anthracite coal, that rivalled the precious gems almost, in glossy beauty. Burden of Troy, was there too, with his patent horse shoes, which he will hereafter make, almost as cheap as cut nails, and save the farmers many a lost day, in waiting on the laggard Vulcans, while forging this never ready article by hand. We hope he will send the nails along with them, as they are always to be made at the last minute. Braziers' rods, *made throughout with Anthracite coal,* by Peter Cooper, of this City, well merited the gold medal they received. Several specimens of iron roofs were shown, and utensils of galvanized iron, saturated with zinc, and unassailable by rust, would seem to elevate the coarser metals, in some measure, to a par with the finer and more precious. Mr. Webb, of Wilmington, sent some beautiful specimens of corn stalk sugar. There is but one thing left for him to do in this matter, which is to demonstrate the practicability of making it *profitably,* and the silken tassels of the right hand gift of the Indian goddess, will wave in the richest luxuriance, almost uninterruptedly from Cape Horn to the sources of the Mississippi. We reluctantly close this brief notice, with the fact, that 1700 *specimens* were here exhibited, showing a considerable increase in the display over any preceding Fair.

TUSSACK GRASS.—Captain Ross, of the Antarctic Expedition, recently from the Falkland Islands, gives a glowing description of a new species of *Bog Grass* discovered there, which it may be of great importance hereafter to add to the productions of our own country. We quote from the (Eng.) New Farmer's Journal. He says—

"The splendid tussack grass is the gold and glory of these islands. It will, I hope, yet make the fortune of Orkney and Irish landowners of peat bogs. Every animal here feeds upon it with avidity, and fattens in a short time. It may be planted and cut like the guinea grass of the West Indies. The blades are about six feet long, and from 200 to 300 shoots spring from one plant. I have proved, by several experiments, that one man can cut 100 bundles in a day; and that a horse will greedily devour five of these in the same time. Indeed, so fond of it are both horses and cows, that they will eat the dry tussack thatch from the roofs of the houses in preference to good grass. About four inches of the root eats like the mountain cabbage. It loves a rank wet peat bog, with the sea spray over it. Indeed when the sea beats over it with the greatest violence, and the sea spray is carried furthest, then the tussack grass thrives best on the soil it loves. All the smaller islands here, though some of them are as large as Guernsey, are covered with tussack, which is nutritious all the year. The whole of the gentlemen on the expedition are delighted with the Falkland Islands, and express themselves as being more pleased with them than even with New Zealand. Some think them in every way better for colonisation, even with the drawback of wanting timber trees there. I have tamed a guanacoe from Patagonia. He lies down before the fire, with his head on my knee, like a dog, though he is now as tall as a donkey. I hope to get more in the Falkland Islands. They browse on the poorest land, and their flesh is like venison. Their wool is thick, but I fear not so valuabe as that of the alpaca. I hope soon to give a favorable account of my adding to our domestic breed of animals the valuable fur seal."

Patent Stucco Paint Cement.—A respectable English Journal announces a new invention of *Stucco* which is pronounced *perfect,* after the following fashion:—

"We have had an opportunity of seeing some specimens of this cement that have for three years been exposed by the sea-side in a situation subject to the storms of winter and the heat of summer, in Plymouth, where the cement is manufactured, and where the climate is well known as not the most dry in the kingdom; and we were surprised at finding a complete growth of granite stone, from what was, when laid on the walls of the building, a sort of fluidized substance mixed with sand. We could hardly, in fact, find a more appropriate name for the composition than a fluid stone. It may be applied by a common plasterer, with his ordinary tools, over any surface, be it brick, or plaster, or old stucco, or wood, or slate, or even glass itself (such is its tenacity); any building covered with it becoming encased in stone, resisting and defying as it ripens or becomes hard, any action of the atmosphere either of wet, frost, or heat, increasing in hardness the more exposed it is, and is arriving at maturity and perfection when other cements and stuccoes are beginning to perish."

If this is not some egregious puff, of which we must acknowledge ourselves somewhat suspicious, it must prove invaluable to such as desire an air tight, water tight, durable and elegant building. The composition is not given.

Erie County Agricultural Fair.

On the 5th and 6th of October we had the pleasure of attending the Erie county Agricultural Fair at Buffalo, together with the Mechanics' Association for the same county, and their Rochester guests, who united with them in a fine display of furniture, edge tools, and a great variety of other things combining the elegant and the useful. The weather was of the most delightful autumnal kind throughout,—the mechanical show was in the beautiful, large stone cottage of Doctor Johnson,—while the agricultural was held in the extensive grounds and shady park which adorns it immediately in the rear. It was said to be twice as extensive in animals, and various other things, as that of last year, and in visitors, especially ladies, to have been at least quadrupled, showing that the interest in agriculture and all appertaining to it is greatly upon the increase in this quarter.

Of Horses, the exhibition was much superior to what we supposed it could have been, comprising several very fine stallions, brood mares, colts, and match and single horses in harness. The stock most highly approved was the produce of the celebrated trotting horses, sent out here several years since from Long Island, by T. T. Kissam, Esq., of New York, being full brothers, Bellfounder and Bellport.

The show of neat cattle was such, as, we will venture to say, few counties in the state will equal, though we can recollect, nine years since, that not a single improved animal was owned in the county. Mr. L. F. Allen, of Black Rock, had up a draft of 13 head of Durhams and Devons, while Mr. Warren Granger, and some others, fell but a little behind in the display of numbers and grades, and natives also were plenty, of a superior quality, together with about twenty yoke of superb working oxen, and fat beeves and steers, that it would have done credit even to the Smithfield market of England.

In sheep, the exhibition was quite limited, a few natives, South Downs, and Merinos, and a greater number of Leicesters.

The number of swine was not large. The best were of the Berkshire breed; but some others, of a most enormous size, struck us as being a cross of the Woburns.

Of Butter, when we consider the great number of large dairies in this vicinity, the show was very meagre, but for this deficiency ample amends were made in the cheese. A lot of five, weighing about 100 lbs. each, belonging to Mr. Arnold, took the first premium; some others, of very great dimensions, we thought of scarcely inferior merit. They weighed respectively 278½, 269, 267½, 267, and 252½ lbs. They were made by Mr. Austin, of Hamburg, who keeps 80 cows—each cheese being made from three milkings of the whole herd. James Murray, Esq., of this city, purchased the largest at 10 cents per pound, to send to his friends in Scotland. We shall not be much surprised if the bonny Scots, upon its arrival, took it for an additional hill among the Grampians, or Cheviots, fresh risen under the auspices of a gilded moon, from old Ocean's watery bed. The product of Mr. Austin's dairy the present year will be at least twelve tons, and some of his neighbors scarcely fall behind; indeed, Hamburg, in Erie county, has become one of the most celebrated dairy districts in the United States, though it has been recently settled, and we have never heard of their being beaten in size, except in one instance which we believe was by Col. Meecham, of Oswego.

The Farm Implements were a very poor show, as to numbers and variety, and we really hope to see, in this great commercial and agricultural depôt, a better one hereafter. Mr. Smith, the plow manufacturer here, had a fair assortment; others exhibited scarce over two each. The Furnaces were pretty fairly represented in stoves; that exhibited by Mr. Dudley being the best, most durable, and simple, which we have yet seen for plain cooking in the farmer's family.

In farm, garden, and green house Plants, and grains and roots, there was a fine display, the same also of household manufactures, cocoons and silk.

The Mechanics' Show was quite respectable. The plowing match was a very spirited contest, and we thought excited more attention than anything else. Five noble pairs of horses, and one yoke of cattle entered for competition; the quantity of land to be plowed being one quarter of an acre. The work was beautifully done in very close time, Mr. Curtis' team taking the prize, having accomplished the task in 51 minutes.

The committees then made their reports, which were short and to the point, and read upon the ground, and the prizes declared off by the secretary, and the Society adjourned to the 15th of November, when the premiums for the best improved farms, root, and grain crops, will be passed upon.

A very pretty display of Poultry was made upon the occasion, and among the curiosities, we noticed some China fowls, exhibited by Mr. Hodge, and but little larger than full grown Woodcocks.

Black Palmer Worm.—We notice in the last New Farmers' Journal, of England, that Wm. Webb has succeeded in effectually destroying this pest, which had taken possession of a field of Sweeds turnips. He first tried *smoking* them, without any effect. His next application was dust scattered on the leaves, which threw them upon the ground, but they soon recovered and recommenced their ravages. The plan then adopted, was to take large succulent elder boughs, draw them over the plants, by which they were swept on to the ground, and while in this situation, he sowed *fresh slacked lime* over them, which nearly cleared the field. A subsequent application of the last remedy, effectually vanquished the marauders.

Raising Indigo.—We would earnestly call the attention of our southern agriculturists, to the consideration of again making indigo a staple in their productions. It was formerly raised in large quantities at the south, but we believe the profit of producing it was materially lessened by its subsequent extensive culture among the natives of British provinces in the East Indies and elsewhere; and the great demand for cotton since created here, has withdrawn public attention from this subject altogether. A writer in the S. W. Farmer says, one reason of abandoning the cultivation of it in South Carolina was, the escape of an offensive, and to some extent, deleterious gas, in the fermentation. This difficulty, modern chimistry can *undoubtedly* obviate. Edwards' history of the West Indies, written many years since, gives some important data on the culture, manufacture, and expense of producing it, though a modern American genius put on this subject, will doubtless develop some new, improved, more economical, and profitable plan of raising and preparing it for market.

Tour in England, No. 8.

Irrigation and Water Meadows.—One of the greatest and most beautiful agricultural improvements that we saw in England, was the water meadows; and these interested us the more, in consequence of our feeling the necessity of adopting them in our own climate, where they are doubly needed on account of its much greater dryness; and the superior facilities from the natural surface of America and its numberless rivers, brooks and springs, which seem almost formed by a beneficent Providence, for the express purpose of irrigating our thirsty and parched lands. We shall pass over such as are found on the Humber, and other rivers emptying directly into the sea, as they are flooded by means of embankments through sluices, at the rise of tides, in a manner already familiar to our readers on the Jersey marshes in the vicinity of New-York, as also at Philadelphia and other places along the sea coast. They are also much on the same principle as the rice fields at the south, which are flooded from the sea or the Mississippi.

All who have ever heard of the overflowings of the Nile, or passed up the magnificent valley of the Connecticut, along the banks of the Genesee, and the wide spread delta of the Mississippi, and hundreds of others of our rivers, cannot but have noticed the surpassing fertility given to the land, in consequence of the annual rise of their waters, and the deposite from the enriching sediment; it is to avail themselves of something like the advantages of these great overflowings, on a small scale, from their own little rivers, that the English landholders have constructed their water meadows, and in some instances have gone to a very great expense in so doing. It is computed that there are at least 70,000 acres of water meadows in Gloucestershire, Berks, Wilts, and Hants, which have been made at an expense of from 5*l.* to 45*l.* per acre, the average not being less perhaps than 15*l.* or say $75 per acre. Johnson asserts, that in 1821 forty acres of the Freegate Whins, ten of which were made from a poor sandy soil, thrown up by the sea in the vicinity of Edinburg, cost 1000*l.*, and let for about 600*l.* per annum, and are in a constant state of improvement. The Craigintinny meadows, near the same place, let for 20*l.* to 30*l.* per acre per annum, while "in 1826, part of the Earl of Moray's meadow fetched 57*l.* ($275) per acre per annum." But it must be recollected that these are in the vicinity of a large town, where the grass is cut daily, and carried in fresh, and retailed at high prices for soiling. In no other way could these meadows command such exorbitant rents. They yield four to five crops of grass every season, which if dried, it is estimated would nearly equal two tons in weight at each cutting. But the water used here for overflowing is unusually *rich*, it receiving the wash of all the sewers of this large town, and hence their greatly increased fertilising effects.

As it respects the enriching matter found in other waters, we quote from Johnson's Far. Ency. page 684. "With regard to the composition of river water, there have been several chimical examinations; that of the Thames was analysed by Dr. Bostock, who found in 10,000 parts, after most of its mechanically suspended matters had subsided, about 1 3-4 parts of foreign substances, viz:

	Parts.
Organic matters,	0.07
Carbonate of lime,	1.53
Sulphate of lime,	0.15
Muriate of soda,	0.02

"In an equal quantity ot the waters of the Clyde, Dr. Thomson found 1 1-6 part of solid substances, namely,—

	Parts.
Common salt,	0.369
Muriate of Magnesia,	0.305
Sulphate of Soda,	0.114
Carbonate of lime,	0.394
Silica,	0.118

"The water of the Itchen in Hampshire is one of the most celebrated of all the southern streams, for the use of the irrigator. I found in 10,000 parts of its water, about 2 1-2 parts of solid matter, viz :—

	Parts.
Organic matter,	0.02
Carbonate of lime,	1.89
Sulphate of lime,	0.72
Muriate of soda,	0.01

"From an examination of the substances found in these streams, (and they afford a pretty correct view of the contents of most others,) the farmer will see that they all yield ingredients which are the food or natural constituents of the grasses. Thus, sulphate and carbonate of lime are found in most of them, and there is no river-water which does not contain, in some proportion or other, organic matter.

"If the river-water contains gypsum (sulphate of lime) which it certainly does—if the water is *hard*, it must, under ordinary circumstances, on this account alone be highly fertilising to meadows, since all grasses contain this salt in very sensible proportions; for, calculating that one part of sulphate of lime is contained in every two thousand parts of river water, and that every square yard of dry meadow soil absorbs only eight gallons of water, and this is a very moderate allowance, for many soils will absorb three or four times that quantity, then it will be found that, by every flooding, more than one hundred weight and a half of gypsum per acre is diffused through the soil in the water, a quantity equal to that generally adopted by those who spread gypsum on their clover crops, lucern, and sainfoin, as a manure, either in the state of powder, or as it exists in ashes. And if we apply the same calculation to the organic substances, ever more or less contained in flood waters, and allow only twenty parts of animal and vegetable remains to be present in a thousand parts of river water, then we shall find, taking the same data, that every soaking with such water will add to the meadow nearly two tons per acre of animal and vegetable matters, which, allowing in the case of water meadows, five floodings per annum, is equal to a yearly application of *ten* tons of organic matter.

"The quantity of foreign substance present in river-water, although commonly less, yet very often exceeds, what I have thus calculated to exist in it. I have found it impossible, however, to give from analysis the amount which, under ordinary circumstances, is present in river waters, with any tolerable accuracy, since the proportion not only varies at different seasons of the year, but a considerable proportion of the merely mechanically suspended matters subside, when the specimen water is suffered to rest. In my conclusions in regard to the theory of irrigation I have found many excellent practical farmers concur. Thus Mr. Simmons of St. Croix, near Winchester, considered that the great benefit of water flooding for meadows is derived, in the first place, from the deposites made by the muddy waters on the grass; and, secondly, from the winter covering with water preventing the ill effects to the grass of sudden transitions in the temperature of the atmosphere. This gentleman is perfectly aware of the value of the addition of the city drainage of Winchester to the fertilising qualities of the Itchen river water, and of its superiority for irrigation after it has flowed past the city, having water meadows both above and below the town; and he finds that, if the water has been once used for irrigation, that then its fertilising properties are so materially reduced, that it is of little value for again passing over the meadows."

Sir Humphrey Davy thus explains the fertilising effects of irrigation:—"In general, in nature, the operation of water is to bring earthy substances into an extreme state of division: but in the artificial watering of meadows, the beneficial effects depend upon many different causes, some chimical, some mechanical. Water is absolutely essential to vegetation; and when land has been covered by water in the winter, or in the beginning of spring, the moisture which has penetrated deep into the soil, and even the subsoil becomes a source of nourishment to the roots of the plants in the summer, and prevents those bad effects which often happen in lands in their natural state, from a long continuance of dry weather. When the water used in irrigation has flowed over a calcarious country, it is generally found impregnated with carbonate of lime; and in this state it tends, in many instances, to ameliorate the soil. Common river-water also generally contains a certain portion of organisable matter, which is much greater after rains than at other times; or which exist in the largest quantity when the stream rises in a cultivated country. Even in cases where the water used for flooding is pure, and free from animal or vegetable substances, it acts by causing a more equable diffusion of nutritive matter existing in the land; and in very cold seasons it preserves the tender roots and leaves of the grass from being affected by frost. Water is of greater specific gravity at 42° Fahrenheit, than at 32°, the freezing point; and hence in a meadow irrigated in winter, the water immediately in contact with the grass is rarely below 40°, a degree of temperature not at all prejudicial to the living organs of plants. In 1804, in the month of March, the temperature in a water meadow near Hungerford was examined by a very delicate thermometer. The temperature of the air at seven in the morning was 29°. The water was frozen above the grass. The temperature of the soil below the water in which the roots of the grass were fixed, was 43.° In general those waters which breed the best fish are the best fitted for watering meadows; but most of the benefits of irrigation may be derived from any kind of water. It is however a general principle that waters containing feruginous impregnation, though possessed of fertilizing effects when applied to a calcarious soil, are injurious on soils which do not effervesce with acids; and that calcarious waters, which are known by the earthy deposit they afford when boiled, are of most use on silicious soils, or other soils containing no remarkable quantity of carbonate of lime."

In forming water weadows in England, if the ground be nearly flat, the surface is made as even as possible, by levelling all little hillocks and filling up the hollows; a dam or weir is then thrown across the stream above, and the water brought in by a main feeder, from which small ditches are cut in those directions through the field, which are best calculated to distribute it in the quickest time and most evenly, and the surplus then carried off, so as to leave the meadows perfectly free from all standing water, when required. When the land is descending, canals or ditches are cut out running parallel with each other along its whole length, thus forming the meadow into beds of slightly descending terraces. The water in sluices is then let into the upper canal, from which, when full, it slowly runs over, trickling along and irrigating the space of ground below, and is then taken up by a second ditch, and so on as long as the descent of the meadow continues and the whole is watered. Three cuttings of hay are usually obtained from these meadows every season, averaging about five tons of dried grass in all; and in addition they yield considerable late fall and early spring pasture. In letting on the water, they are managed differently according to the weather and circumstances; but it is always intended that they shall have the benefit of the October and November floods, as these are known to abound in more fertilizing matter, than those of the winter and spring. At this time the water is kept on three or four days, a week, or fortnight at a time, with such intermissions for drying as are thought proper, and again let on in the spring, and generally, immediately after each cutting of hay in the summer, for be it remembered, that the *fertility* imparted from the water, is even more sought after than its *moisture*. In the drier climate of America, the moisture, perhaps, will be as beneficial as the fertilizing substances which the waters hold in solution, and which are so evenly distributed over the ground, for the nourishment and rapid growth of the grass.

It is said that irrigation has been practiced more or less in England ever since its occupancy by the Romans, but according to Loudon, the importance of it was not much considered till the publication of Vaughan's work on this subject, in 1610. Attempts, however, at this great improvement in agriculture, could not have been of much account till a century and a half later, as he adds further on, "that the principal scientific efforts in watering lands, have been made during the latter end of the last and beginning of the present century, in consequence of a treatise on the subject, by George Boswell, published in 1780, and various others by the Rev. Thomas Wright, which appeared from 1789 to 1810.

We understood that the cultivation of water meadows was considerably on the increase in England; we wish we could add the same of our own country, where they are much more needed, especially in the southern parts of it. We believe with a proper system of irrigation, that the growth of grass might be doubled during the summer, above the 40° of latitude, and be had in great profusion from this to the 35°, nine to ten months of the year, and from thence south the whole year round. We hope that the attention of our countrymen will be aroused to the importance of commencing an improvement so useful, so feasible, and which is so sure to repay them a large interest for the capital laid out in it, on sandy and dry gravelly soil.

The Great Miami.

This beautiful valley is so much like the Sciota, that one description of its general natural features, may answer for both, save that the stream of the former pours out a larger volume of water into the Ohio than the latter, and we should judge that its bottoms have a greater average width, being, as we were informed, at least three miles broad in several places that we passed in winding along up the river, though the general width is probably not more than the half of this. The soil is a light brown color, inclining to yellow and of the richest alluvial, from two to ten feet deep, sometimes based directly upon the limestone ledge or gravel, but more generally separated from it by a substratum of a greater or less intermixture of sand and clay. It is friable and easily worked—but not so sandy as to burn or much endanger, even in the dryest season, the immense eorn crops that annually wave with such luxuriance over this fertile valley.

The Miami is not a dull sluggish stream, but abounds in rapids with sufficient fall to give water power at any time that it may be necessary, for an immense manufacturing business. The fall near Hamilton alone, within the space of four miles, is estimated at twenty-eight feet, with sufficient water even in the driest times, to turn 160 pairs of mill-stones.

This valley was settled principally by New Jersey and other northern people, and is divided into small farms, generally from one hundred to two hundred and fifty acres each, which are cultivated personally by the owners. They are an intelligent, moral, and industrious people, all possessing the comforts of life, and many, those of its luxuries and elegancies in a high degree. Several fine towns are found here, the principal of which are, Hamilton, Middleton, and Dayton, where the Mad river, the largest branch of the Miami enters, and adds much to its volume of water. The bottoms along the river are devoted principally to corn, which the farmers cultivate with great ease and perfection. It yields from fifty to ninety bushels to the acre, planted in the usual manner, in hills four feet apart. The average product may be reckoned at sixty to sixty-five bushels to the acre. After a successive cropping of twenty or thirty years in corn, the bottoms will produce wheat at the rate of twenty-five to forty bushels per acre, according to the season.

The uplands bordering this valley are also excellent for corn, and the smaller grains, as well as grass, and the different varieties of roots, the particular cultivation of which, and course of cropping, we shall describe hereafter.

A considerable number of superior animals of different kinds have been introduced into this valley, and the people are spirited in improving their stock. Some of the largest sized blood horses have stood here from time to time, and this produce they are now crossing with powerful trotting stallions, for the purpose of breeding good roadsters and carriage horses, in which they will undoubtedly be very successful. Durham cattle, with now and then a Hereford and Devon with their crosses abound. The Short Horn, however, prevail, as their good size and early maturity suit the rich pastures of the country, and their cross is found to produce better milkers than any other breed. Not much attention has yet been paid to sheep in large flocks, principally, we believe, on account of the destruction by dogs, each family contenting itself with a sufficient number to supply its own wants for wool and mutton, together with small sales occasionally at the market-towns of the valley. Saxons and Merinos abound; Leicesters and South Downs, as yet are limited. Such as find most favor with the ordinary farmers, is a cross of the coarser Merino or South Down with the Leicester, as this gives them a sheep of good size, of fair mutton, and a large fleece, the quality of which is sufficiently fine for all domestic purposes.

But the stock to which the people here have paid the greatest attention, and which is their largest and most staple production, is swine. The immense crops of corn enable them to keep vast herds of these animals, and one will find from fifty to three hundred head of the various sizes, from pigs up to immense fatting porkers, on nearly every farm that he may happen to pass. Nearly every variety of hog has been introduced here, and found more or less favor, till the Berkshires appeared, and notwithstanding a good deal of prejudice was at first excited towards them, it has gradually died away, and they may be said now to have become established from their own intrinsic merits, in general favor. This cross on the large white Miami hog, is among the most splendid animal that we ever saw. They retain nearly all the fine points of the Berkshire, with a great increase of size; we have seen them repeatedly, that would weigh from eight hundred to one thousand pounds, and of a form and fashion almost equalling Kennilworths, and to those who are admirers of large hogs, we cannot but recommend this cross as superior to anything else that we know of in America. Of course, in so great an extent of country, the breeders are numerous, and wanting room to mention all, we can only particularise a few of the most prominent that we had the pleasure of becoming acquainted with, during our short stay in the valley.

We believe the honor of first introducing Berkshires into this quarter, must be awardto Munson Beach, Esq., of Lebanon, whose first stock was derived some six years since, from the piggery of Messrs. A. & G. Brentnell, of Orange County, N. Y. These were followed up by others from Mr. Bement, of Albany, and at last succeeded by direct importations from England. They have been bred with great care by Mr. Beach, and very generally distributed throughout the country, to its great benefit. Near neighbors to Mr. B., are the Messrs. Steddoms, very excellent people, among whom we saw a splendid lot of Berkshires, and at Mr. Samuel Steddoms, the fine imported boar Newbury, owned at present by Charles Foster, Esq., editor of the Western Farmer and Gardener. Below Middletown is Mr. Read, where the large imported Reading formerly stood, the joint property of Messrs R. & Beach, where we saw one of the finest lot of sows that ever crossed our path; they are of great size and highly bred. But the most prominent man at present engaged in Berkshire breeding, is Mr. R. H. Hendrickson, of Middletown, who has taken up the business with great spirit. He has a beautiful farm with sufficient upland for a variety, but the greater share of it, is among the most fertile bottoms that are bounded by the Miami. These he cultivates in corn and wheat in superior style. His yield last year was about seventy bushels to the acre on an average of the former, and thirty-nine bushels of the latter, although the season, on account of the drought, was not particularly favorable for either of these crops.

Mr. Hendrickson has in his piggery, two boars and twenty breeding sows, all of the purest and best blood, and of fine size and style. The boars were both imported direct from England last year, and are Windsor Castle and Earl Craven. The portrait of the former and a particular description of him appeared in our August number, and needs no further remark from us. He is the most admired and popular animal that ever came into the Miami valley, and his superiority is at once acknowledged by all who have seen him. Earl Craven is but a trifle inferior in size, of very fine points, superior hams, and as quiet and gentle in disposition as a Chinese. He is considered among the hardiest stocks of Berkshire, England, his color being nearly a jet black, with a slight flecking of white.

Of the imported sows, we most admired Sultana: she would easily weigh six hundred pounds fatted, and to this great size, adds fine points, soft thin hair, and the mellow handling of a Durham ox. Elfrida and Arethusa are particularly beautiful, though not quite so large as Sultana, yet both have proved themselves most excellent breeders. Then there are Hermosa, Picaniny, Niskayuna, and others, all of which are not only large, but very fine, and we may close their eulogy by saying, that we have never seen stock better looked after than Mr. Hendrickson's, or pigs reared in better condition, and we freely recommend his breeding to all who may wish the Berkshire stock in the west.

We also saw at Mr. Hendrickson's, Kenilworth and Countess Amy, two very large white pigs imported from England last year the male of which, for the gratification of the admirers of big animals, he intended crossing upon the big Miami stock of the country—this pair will be very large when fully matured, and at the rate they were growing when we last saw them, it will be a size quite satisfactory to any one demanding less than a Rhinoceros. Aside from these, there was a sort of Mastodon of a hog, standing nearly four feet high, and of unknown length, and which, fully fatted, it is estimated, will weigh one thousand two hundred pounds. He is a cross of the Berkshire and Miami, and to this *baby of a pig*, Mr. H. is going to add some others of the same kind, and by way of showing what can be done in his valley, set himself afloat in a large flat boat as soon as the waters rise, and challenge the western world to show against him, from the beginning of the Ohio to the mouth of the Mississippi. We say success to his enterprise, and can only hope that he will find the waters *deep* enough to float him. In addition to hogs, Mr. Hendrickson has some fine Durhams, being joint owner with Mr. Read, in Brutus, imported by Wm. Neff, Esq., of Cincinnati. His grade Short Horns, are superior as milkers, and he greatly prides himself on this point, a quality in neat stock that we cannot too much praise, or think anything more deserving or useful.

Ashes from Anthracite Coal and City Manures.—Will some of our readers furnish us the results of experiments on the application of the anthracite ashes to different crops in dissimilar soils, and under various circumstances? We have repeatedly asked for the above information personally, but have met with no one able to give a satisfactory answer to the inquiry. By many, their utility is doubted, and others assert that they are positively injurious. We believe, on the contrary, they contain highly concentrated principles of nutrition, which only require the proper treatment, to add immensely to the fertility of our vegetable gardens and farming lands. We should be happy to demonstrate to our municipal authorities the propriety of withdrawing some of the stimulants of our olfactories, and the anthracite ashes among them, which now so abundantly fill our streets, and applying them as stimulants to the soil.

As before stated, in our 2d No. the urate from an adult in one year, contains fertilizing matter sufficient to produce over 13 bushels of wheat; and if to this we add its half, for the other excrementitious matter, we have the materials for furnishing 20 bushels of wheat annually from each person. If we estimate the population of this city, Brooklyn and their dependencies, for the purpose of including such as do not make use of these materials of fertilization, we shall have at least 350,000. The loss of ashes, garbage, and other commodities, together with the wasted manure from animals, chemical works, glass-houses, butchers premises, &c. &c., is equivalent to 50,000 more. From this deduct what is now used in poudrette, crushed bones, and animal manures, carelessly collected from the streets and carried off by our neighboring farmers, and we shall make a liberal allowance by estimating it at one half. This may appear an exaggerated estimate to the ignorant and unreflecting, but we believe its correctness will readily be admitted by the most scientific agriculturists. We have then, as the result of the annual loss to this neighborhood, from the want of proper and efficient means for husbanding this uncoined gold of the farmer, the prime materials of his wealth, 200,000 times 20 bushels of wheat, amounting to 4,000,000 bushels, or its equivalent in other products. From this, we are to deduct the cost of raising and bringing to market, which may be set down at oen half. The expense of collecting and removing the manure, we should consider as fully compensated by the absence of the noxious smells and loathsome sights, yes, and the very *taste* of the putrid things, when after being ground to an impalpable powder, they are stirred up by every passing vehicle, or ambling jade, or gust of wind, and float over our palates as we inhale the breath of life. Here is a great practical reform needed in our city, which if thoroughly carried out, would afford health to the town and wealth to the country. Did we possess a tithe of the investigations on this subject, we have on the politics of the day, and a hundredth part of the effort to mature and carry out some efficient plan for its accomplishment, that we make in electing the Namby Pambys and Tommy Noodles to a short-lived, petty office, we should secure decency, comfort, health and abundance to ourselves, instead of the more than half heathenish nuisances by which we are surrounded. We trust that some of our worthy schepens and burgomasters will take up this subject, after getting through the more important matters of the election. We can assure them, there are laurels to be won in this cause greener and more enduring, than any they can secure from the most successful political career for 20 years to come. *They* can commence a plan, but *science only* is competent to perfecting it.

It should be the next great undertaking after the Croton enterprise. We make no suggestions as to the ultimate plan. The longest experience, the deepest research, the most extensive observation, and the highest attainments of science, can all be worthily and appropriately bestowed on this object. The most gifted minds alone are competent to this task. A Davy, a Liebig or a Dana, might do much to perfect a system, though a combination of effort from all the genius of the age, would still leave this subject in its infancy. Those who affect to consider this subject *too low* for them, are mistaken in their relative positions. *They are too low* for the subject. It demands the highest attainments, and if we mistake not the spirit of the age, it will ere long receive them.

Suggestions for testing Plows.—We are not a little chagrined in being compelled to witness, in two conspicuous trials of plows this fall, at the N. Y. State Fair, and the Fair of the American Institute, the want of sufficient accuracy in the *test*, to enable the committees to speak confidently and decidedly of the result. We believe the only perfect trial of the relative draught of plows, must be made by a windlass, to be so graduated, as to its power and motion, that a man can easily move the plows at an equal and regular, though slow and suitable speed. It is certain there can be no test without perfect equality of speed, as much more power is required to move the instrument fast than slow. A furrow eight or ten feet in length, on precisely the same soils, is sufficient; and these furrows could be repeated as often as required, till a committee was satisfied. A stationary windlass would be the most simple, with the rope passing over a pulley, to be attached to a pointed bar or stake which is to be moved to the right point in every successive furrow; or what is better, a horizontal timber firmly secured at right angles with the furrows, and the chain or rope holding the pulley, could be slipped along as required. The ground for the trial should be a firm compact turf, on a strongly adhesive soil, of the proper degree of moisture. To make the experiment complete, we would advise, that in addition to exactness in width and depth as near as may be, the preceding furrow be so far removed from the unplowed land, that a board or plank of the required length and width can be laid down to receive the entire furrow as it is turned over, and the *weight* of this mass would furnish a correction to any inaccuracy as to the width and depth of the furrows under trial.

Dynamometers.—We have seen none quite perfect thus far. We believe the correct principle is applied, but some more experience is required to perfect them. We hope another year will furnish us with such as are faultless. The price asked for such as we have seen, is about $15. We do not think it policy to lower the standard of value, but rather *to bring the merits of the instrument up to the price.* A dynamometer, properly applied, is a very important instrument, and may save thousands of bushels of provender annually to the members of every county Agricultural Society, and none should be without one.

Growing Wheat *in the Eastern States.*—We suggest for our eastern farmers, the propriety of applying to their land on which their wheat is sown, a plentiful supply of ashes. We believe it is the *alkali*, rather than the *lime*, that is requisite to mature and perfect good and abundant crops of this valuable grain. The addition of the straw to the land devoted to this crop, we also deem important. Shall we hear from some of them on this subject?

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

"Sheep on the Western Prairies."

GENT.—The article in your September No. under the above title, was the first one read by me, and it is of so much importance not only to the West but to the East also, that I wish to corroborate the statements of Mr. Murray, and add some of my own.

Sheep can now be purchased for even less than the price he names. The distance to drive, which is of some importance to a person who would like to look into the business, would be from 100 to 200 miles, and the best time to drive, directly after shearing, or about the middle of September.

There are hundreds of situations where a man might keep a thousand or two head of sheep for many years, without buying more than 40 acres of land, costing $50; and this merely for a home for the flock, as "Uncle Sam," the greatest landholder in the world, has no objection to our pasturing his big prairies. There are sundry such capital situations in this county, only 40 miles from Chicago. The cost of stocking such a business would be about thus:—

Forty acres of land,	$50
A comfortable log cabin, two rooms,	50
A fence, ten rails high, around the land, (which will keep out prairie wolves,) 6,400 rails—3,600 rails for yards, &c. making 10,000, delivered in fence,	100
A small stable for cow and horse,	25
Another small building, for store-house, &c.	25
A well of first rate water and pump,	30
1,000 sheep, delivered on the spot, at $1 each,	1,000

Any quantity of hay required at $1,50 a ton, delivered in the stack, and oats at 12½ cts. a bushel, or corn 16 cents. Board and wages about the same as mentioned by Mr. Murray, though I think that item would be a trifle lower, say $10 a month for wages, and board in a family on the premises would not cost over $1 a week. The item of salt costs $1,25 to $1,50 a barrel in Chicago, and 50 cents transportation: hauling the wool to Chicago 25 cts. a hundred pounds.

No doubt about the hogs destroying the snakes—if they do not eat them, as some doubt, they certainly eat the eggs. You give a wrong impression to those not well versed in the subject, when you say "land can be had for *government price*, say $1,25 to $4 an acre*" &c. Government land is always $1,25 an acre. Improved land can be bought of individuals from 3 to 10 dollars an acre, according to location and value of improvements; often it can be had for less than the improvements cost; such is the condition of those now in debt.

The natural grass of the prairie it is no wonder that Mr. Murray prefers, because it is, either green or dry, better for sheep than the best of timothy, and the sheep also prefer it. There are a great many weeds which they are very fond of. His plan of seeding prairies is a good one. The picket fence mentioned, though not a very expensive one, is not necessary.

The cost of breaking prairie, although it seems low, is neverthless not so low by 25 cents an acre as it can be done in this county. If I was going to cultivate prairie for sheep, I should sow a good deal of rye for winter pasture, and save a great deal of hay.

If I was breaking sod in June and July for wheat, I would plow five inches deep and no matter how wide, say 20 or 24 inches, and be careful to lay every furrow flat over; this gives a good quantity of loose earth to harrow in the wheat upon, and by the next spring after the wheat comes off, it will plow up tolerably easy, though not mellow; it will take two years to rot.

If I was plowing in August to plant in the spring on the sod with corn, 2 1-2 or 3 inches would do well; the sod will rot sooner than when plowed deeper. If I was plowing in the spring to sow oats on the sod, I would plow 3 1-2 or 4 inches deep. The furrow slice should always be turned completely bottom up, and lay until rotten enough to harrow to pieces when plowed again, let that be longer or shorter, which will depend a good deal on the time of year it was broken. You must understand that a "sod crop of corn" is planted by dropping the seed in the furrow or by cutting holes in the sod to drop the seed in, and that it cannot be cultivated, as the top of the sod is as dry and hard as a side of sole leather.

On a sheep farm I should not adopt Mr. Murray's four course system. My plan would be to sow rye or oats and grass at every sowing—or turnips and grass occasionally, for fall feed. But it is not necessary here to have rich feed to fatten up the sheep previous to winter, for they are always fat.

---

* $4, was intended to express the price of *improved* land, which would save several of the items of building and fencing enumerated above.—ED'S.

In the article to which I allude, and in this, are many facts that ought to open the eyes of wool growers in the Eastern states, for if the business should be undertaken at the West exclusively, those who pasture upon land worth $100 an acre cannot compete with those that pasture upon land worth ten shillings an acre, and free from tax for five years.

I intend shortly to give you another article upon this subject and other things appertaining to the cultivation of the prairies of the great and growing West. I hope also to become more intimately acquainted with your readers the coming winter. In the mean time I am yours and their friend,

Solon Robinson.

Lake C. H. Sept., 1842.

We are pleased to hear from our old friend again, and on so interesting a subject to American farmers and manufacturers as the above, and hope for the punctual fulfilment of his promise, as a subsequent correspondent. We have been a little apprehensive from his long silence on agricultural matters, that he had taken to politics or some other fashionable pursuit, or was lost in a cane-brake; or mayhap, had taken a bear prisoner, as the Irishman took the six grenadiers, who proved themselves such undisciplined captives, that they not only would'nt go at Pat's bidding, but even prevented the doughty hero's going himself. But at all events, we are rejoiced at his appearance among the farmers again *in these settlements*. We can assure him that we shall look to him for *the latest and most important information* FROM THE PRAIRIES.

For the American Agriculturist.

Long and Short Manure.

Gent.—The question of long and short manure is of too much importance to remain unsettled, as I apprehend it does, at present, each having its advocates for strength and durability in its effects upon land and crops; and we want experimental writers to determine this point. There are many questions asked, where there is one answer given founded upon experience. Questions ought to be asked it is true, and they ought also to be answered; but it frequently happens that many months elapse before they can be answered by actual experiment, during which time they are either forgotten or neglected. But to my starting point. The lot which I am now cultivating contains about three acres, to manure which, I had access to three heaps—the first the produce of ten hogs, fed under cover and littered with straw, the manure being thrown out with the straw, as this became unfit for further use; the second heap was from the stables and barn-yards, where the manure had been thrown during the winter with the litter, as I always bed both cattle and horses; the third was from a barn-yard at a distance, where the manure had been suffered to collect and rot for three or four years in a very slovenly and unthrifty-like manner. The whole was spread on the ground before planting, taking care to plow it in as soon as it was carted on and spread. I don't think there was much difference in the quantity carried on to each section, if so it was accidental, not intentional. The ground was then plowed, leaving a dead furrow between each land, and as it was a stiff clay soil, it became necessary to roll it before any thing further could be advantageously done; after rolling, it was thoroughly harrowed, and again plowed, then rolled, then harrowed; by this time much loose straw and coarse manure appeared on the top. This was carefully raked off into the dead furrows and again rolled, then planted with sugar beet, twenty-two inches between the rows, and during the months of July and August they were thinned out and fed to hogs, intending to leave them standing eight inches apart in the rows; but through the inexperience of the hands who sowed and thinned them, they will vary some from this distance. I should think, from my own experience, eight inches between the plants which are intended for maturity, twenty-two inches between the rows, if to be cultivated with the hoe, is about right; but if with the cultivator, plow and harrow, two and a half feet is near enough. I make the following estimate of the crop, including what has already been fed out to hogs:—from the old manure 800 bushels per acre; from the stable manure 1000, and from the hog manure 1200, or in this proportion. Whether they yield more or less, it is the strength and efficacy of the manure to which I wish to call public attention, and more especially to the difference between green or fresh manure and that which has been fermented and left exposed to sun, wind and rains. Upon the coarse manure and straw raked from the beet bed into the deep furrow, I planted potatoes and turned a furrow from the beet bed each side upon them, breaking the lumps of earth, (clay,) and levelling with the hoe; this was all the tillage they have received except pulling out the weeds by hand, they being covered deep and planted with small pieces of from one to three eyes each. Thus—

each piece eight inches from its fellow. Larger ones I have seldom seen, and there is every appearance of a good yield. Let this question of long and short manure be settled.

It is my opinion that the sooner it is spread upon the earth after it is dropped from the animal the better. I have tried it upon a piece of grass land the two past years, and from land which in 1840 bore comparatively nothing, I have this year cut 2 1-2 tons hay per acre, by manuring it highly in 1841 and 1842 with that which came fresh from the the stable, and was put upon the land in the month of March. I have nothing to say against the age of manure kept under cover and from the air. I believe the longer it is kept the better, even until it turns to saltpetre; with this too I have had some experience, and know something of its great power to stimulate vegetation.

Very respectfully, yours,

October, 1842. INQUIRER.

Michael L. Sullivant, Esq. of Columbus, Ohio, writes us, that he has just finished curing a good crop of 40 acres of hemp, it being the first attempt at raising it in that vicinity. He also adds—" We are much in the spirit of making manure, since reading Johnstone's Agricultural Chimistry, and Dana's Muck Manuel." This is certainly a rare thing for a gentleman to assert who is cultivating the fertile bottoms of the Sciota. We can remember when any person would have been laughed at, upon the slightest supposition of it ever being necessary to enrich the soil in that section of the country, and many of the farmers there still believe manure a great incumbrance and would feel grateful to any one who would take the pains to cart it from their premises. But not so with Mr. Sullivant. He finds from actual experience, that a continual cropping of these fertile bottoms does very gradually exhaust them, and we recollect when we last visited him, of seeing all his manure carefully husbanded in the yards, and carted out to his rich meadows before breaking them up for corn, and of the good effects of this system, we have no doubt the succeeding crops have told a good tale.

We shall be happy to hear of Mr. J. Sullivant's experiments in making sugar from corn stalks, and trust that they will be soon forwarded us for publication.

Another article on the prairie grasses of Ohio we have been confidently looking for, from a correspondent, and are sure our readers and the public will be much benefited by its appearance.

PLAN OF A BEE HIVE.

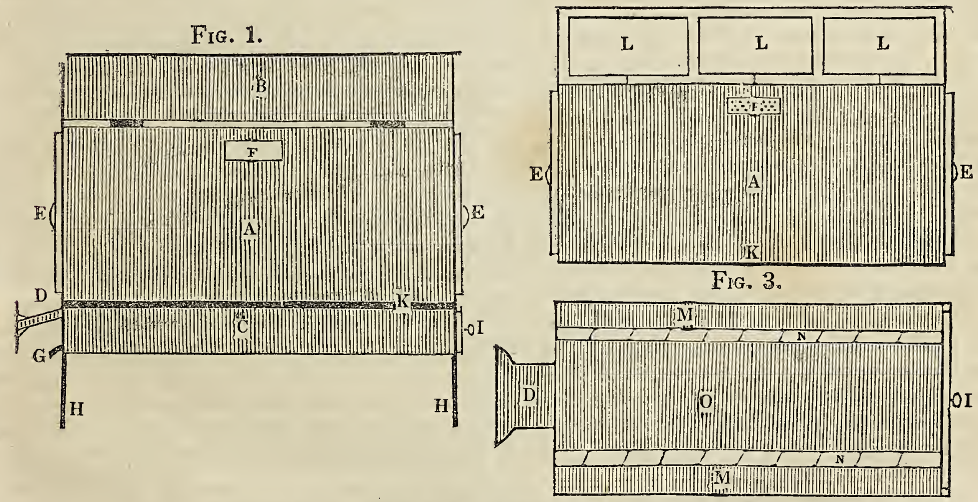


FIG. 1. FIG. 2. FIG. 3.

For the American Agriculturist.

GENT.—Enclosed I send you a drawing of a bee-hive; it is now in full operation, and to all appearance, is the very article that has been so long desired, and if you think it worthy, you will confer a favor by giving it a place in your very valuable periodical.

I call it the CONVENIENT BEE-HIVE, and shall describe it as follows: Fig. 1 represents a side view of the hive as it stands in the apiary; fig. 2, the top or main body of the hive when removed from the base; fig. 3, the base, giving an inside view, when the body of the hive is removed.

The letter *a*, represents the side of the body of the hive; *b*, the door inclosing the drawers; *c*, the side of the base; *d*, the spout at the end of the base; *e*, the doors at the ends of the hive, with a glass eight inches square set in each door; *f*, the ventilator, which is a piece of tin punched full of holes, closed in fig. 1, open in fig. 2; *g*, the plug in the end of the base, which, when drawn, gives an outlet to the bees that get down into the drawer; *h*, the legs of the base; *i*, the drawer in the end of the base; *k*, the wooden band that surrounds the lower edge of the body of the hive, the object of which is, to give security when the two are united; *l*, the drawers above for the reception of honey; *m*, the inclined board; *n*, the vacancy between the inclined and landing boards. Those small marks represent cross sticks, extending from one board to the other, which are intended for the bees to cross upon; *o*, the landing board.

The hive as it stands in the apiary, is three feet eight inches high; the main body of which is two feet in length, fourteen inches in width, and fourteen inches in depth in the clear; above which, the drawers are placed as is seen in fig. 2, being three on a side. The front end of each drawer is filled with glass, so that the apiarian may at all times see what his laborers are doing. The base is of the same length and width of the body of the hive, and four or five inches in depth, and contains the inclined boards, landing boards, and drawers. These inclined boards are from two and a half to three inches in width, and are placed at the upper and inner edge of the sides of the base, at an angle of about 45°. The landing board is set down in the base, (with its upper edge rounded off,) so that its under surface will come on a level with the lower edge of the inclined boards, and at the distance of from half an inch to an inch beneath these, is placed the drawers. The space as represented by the letter *n*, between these boards, is about half an inch in width. The spout projecting at the end of the base, is nine inches long and six inches wide, and is so inserted that the bees, in passing through it, will pass immediately upon the landing board within, which is intended for them to play upon.

The advantage this hive possesses over all others that I have seen, I conceive to be this: First, the facility with which bees may be hived in it, which (by lifting the body from off the base,) is as easily done as the hiving in the old fashioned box or gum hive—and then, so soon as the bees shall have entered their new habitation, (which will require but a few minutes,) it may be set upon the base, and by stopping the spout and putting in the plug, may be immediately carried to its place in the apiary. The second is, in there being a slat partition, running crosswise through the centre of the body of the hive, and extending from top to bottom. The object of which is, to be a guide to the apiarian, in the removing of honey; which, after the hive is once filled, should be alternately removed to this partition annually. The doors being large, this can be easily done by driving the bees to the opposite side of the partition.

The third and last, though not least, is in the construction of the base, which contains the inclined boards, the landing or bottom board, and the drawer, (which contains a tin ventilator six or eight inches square,) which at all times gives the bees such complete victory over the worms, when once they come or are thrown down into the drawer, that the apiarian, if he will attend to his duty as well as the bees will attend to theirs, will be enabled to destroy at least ninety-nine worms out of every hundred that may ever infest his hives. And this, I presume, will be admitted by all, to be quite a preventive in the future breeding of worms. This I conceive to be a decided advantage over all the other hives in use, as in their construction, the worms (if there ever happens to be any, and I presume they may be found more or less at times in all hives,) are cast out upon the ground, and then permitted to crawl to some convenient and suitable place, and there wind up in a cocoon, then in the course of a few days they will be converted into a chrysalis, and then a miller, which soon eats its way out of the cocoon, and then, in the course of a few days after the act of copulation with the male, are in a fit condition to enter the hive and deposit some hundreds or thousands of eggs more.

By killing the worms, you will not have anything like so many *millers* to molest your hives. All I ask of the community is, (if my description has been sufficiently intelligible,) to try the hive, and I think they will agree with me in calling it a *convenient bee-hive.*

M. H. Keever.

Ridgeville, Warren Co., Ohio,
August 22d, 1842.

To Correspondents.—The communication of Mr. C. Bement, and several others, containing a description of Agricultural Fairs which have been held this fall, will appear in our next.

In a recent letter from Judge Beatty, authorizing the publication of the following valuable essay, which he designs shall constitute a part of his forth-coming work, he says in an excursion lately made in different parts of the country, he has found additional and valuable information on this subject, which he will embody in the article before going to press. He will also add an essay on the grazing and feeding of cattle in Kentucky, which is much needed for that region. The subject having had little attention thus far, has not hitherto been reduced to *a system* by their most experienced graziers.

An Essay on the Cultivation of the Black or Yellow Locust.

BY JUDGE BEATTY, OF KENTUCKY.

The rapid growth and great durability of the black locust; the ease with which it is cultivated; the small space of ground necessary for the purpose; and its adaptation for fencing and other valuable uses, render its cultivation of the highest importance. It will be of peculiar value to those portions of the great West, in which prairies are so much more extensive than wood land.

It may be propagated from the seed, or by suffering the sprouts to spring up in places where locust trees have been cut down. The latter mode of raising the locust is attended with the least trouble, and it has the advantage of bringing them forward somewhat earlier than where they are propagated from the seed. But as they can be reared in this way only where the locust already exists, the other method must necessarily be resorted to, where circumstances will not admit of their being cultivated by suffering sprouts to spring up from the roots of those which have been cut down. Both modes of cultivating them will be explained in this essay.

In a country in which the locust already exists, the following method may be adopted. Select a convenient piece of ground, or separate and distinct pieces, on various parts of the plantation, where locusts are growing not too wide asunder. Let all other timber, except the locusts, be cut down, and the ground carefully cleared and cultivated, during the summer, so as to suffer no weeds to go to seed. Hemp, tobacco, pumpkins, &c. would be convenient crops for the purpose. After these crops are removed in the fall, let the ground be plowed, and harrowed, and brushed, so as to leave a smooth surface. About the middle of February,* it should be sowed with red clover, one gallon to the acre, and about the middle of March all the locust trees should be cut down, and the brush and timber removed or burnt. In order to prevent any weeds from growing among the clover, one bushel of *small oats* to the acre, (not more,) might be sowed on the ground about the middle of March, without brushing or harrowing it in. By sowing the oats thin, and one month after the clover, the latter would get a good start, and be less liable to be smothered. Nothing more would be necessary but to enclose the ground with a good fence, so as to protect the young locusts from stock. If the ground is new or very rich, the sowing of the oats may be dispensed with, as by growing rank and falling down thay might injure the young locusts. Besides, new ground or grass land is not apt to be infested with weeds, and therefore the clover would not need to be protected from them. When locusts are cut down in the spring, say about the 15th of March,† (in latitude 39°,) and the ground is prepared, as above directed, a large number of young locusts will spring up among the clover and oats, and will grow with tall and straight bodies. Standing thick, they will be prevented from branching, and require no trimming, nor any other attention, except to keep a geod fence around them until they are so large as not to be liable to injury from stock. Cattle are very fond of browsing upon the leaves and tender branches of the locust, in the spring of the year, and will bend them down, even when they are of considerable size, to get at them. This would prove utterly destructive, and should be carefully guarded against. Indeed, it would be better to keep all stock off the ground, even when the locusts are of considerable size, as this would preserve the ground in a light state, and cause thew to grow much more rapidly. In process of time the unthrifty locusts will be overtopped by those of more vigorous growth, and will die. In this way they will gradually thin themselves. After some years, many of the less thrifty ones, when large enough for stakes, may be cut down for that purpose, and then more room will be left for the others.

Locusts are very subject to be injured by an insect that penetrates the bark, making large holes into the wood of the tree, which greatly injures them. All that are much injured will fall behind, and become *underlings;* but among the great number that will spring from the roots of the old growth, enough will escape serious injury to cover the ground with as many as can grow to advantage. These will flourish and come to perfection, while the unthrifty ones may, from time to time, be cut out for stakes, and riders for fencing.

I have now growing twelve or fifteen hundred locusts, from 15 to 25 years old, reared as herein described, from among which I have had several thousand stakes and riders cut. The balance have grown up tall, and without branching, and promise well for rail timber, but have not grown as rapidly as they should have done, in consequence of the ground being set with blue grass, and pastured with large stock.

Locusts, cultivated as herein directed, may stand, upon an average, within ten feet of each other, and will, in the course of twenty-five or thirty years, attain a size sufficient to produce twenty-five rails each. Standing at the above distance, an acre of ground would contain 435 trees. But suppose, from various calamities, such as standing irregularly, dying, &c., only 300 should attain a size sufficient to average twenty-five rails. At this rate, each acre would produce 7,500 rails, besides stakes enough from the branches for staking the fence made with the rails, say 1,500. Thus ten acres of land, set in locusts, would, in about twenty-five years, yield 75,000 rails, and 1,500 stakes, sufficient to make 7,500 pannels. If the whole of these were cut down, at the end of twenty-five years, the sprouts growing from the old roots, if protected from stock, would produce more than as many more rails and stakes, by the time the fence would require to be renewed.

Thus it will be seen that only ten acres of land would be necessary, to produce rail timber enough to fence in a large plantation.

It may happen that in the place selected, the old locusts may not stand so regular as to fill the whole space with young growth. In that case, the open places might be mowed for hay, but where the locusts stand thick, the clover and oats should be left undisturbed. The clover, growing up annually and falling down, will keep the ground light and rich, and cause the locusts to grow rapidly. After four or five years, when, perhaps, blue grass may, in part, have taken the place of clover, calves and other young stock might be suffered to run among the locusts, in the winter time, but should be removed before the frost leaves the ground, with a view of keeping the ground as light as possible. If a plantation should afford no convenient place, upon which a sufficient number of old locust trees stand, to cultivate locusts upon the plan herein explained, then the following system is recommended.

---

* This is intended for the latitude of Kentucky.

† I have found, when locusts are cut in the fall or winter, that they put up but few sprouts.

" Let a piece of ground be selected, or more than one, (if more convenient,) so situated as to afford the greatest possible facilities for approaching it from all parts of the plantation, say ten acres, and let it be prepared, in all respects as recommended, except that it may be sowed with timothy instead of clover, if more convenient, and either in the fall or spring, as may suit best. In the spring, after the grass has been sowed, plant the whole of the ground with black locusts. The trees planted should be of thrifty growth, and from three to six years old. They should not be planted early in the spring, as is frequently done, for of those, so planted, a large proportion will die. The proper time to plant them, is after the buds shall have so much swollen as that the leaves will begin to be plainly visible. This usually happens about the middle of April—sometimes not till the first of May. In digging the young locusts for planting, care should be taken not to bruise the roots. To avoid this a sharp axe should be used to cut off the larger roots, and all that are bruised should be carefully trimmed with a sharp knife. The lateral branches should be cut off, leaving only a small part of the top. They should be set firmly in the ground, but not more than an inch or two deeper than they naturally grew. The holes should be dug wide, so as to admit the roots to take their proper position, taking care not to double or bend them. It is best to plant after a rain, and the operation had better be delayed till the first leaves are from a quarter to half an inch long, rather than plant without rain. The trees should be planted thirty feet apart, each way, which will give about forty eight to the acre, or more accurately, four hundred and eighty four to ten acres. If any should die, their places should be supplied the next spring, and at that time several shovels full of chip manure, not much rotted, should be put around each tree. This will keep the grass from binding the young trees, and hasten their growth. The ground, thus planted out, may be kept for meadow four or five years; or somewhat longer, if the trees shall not have grown thriftily. The ground should now be plowed, in the fall of the year, and cultivated carefully for the two succeeding years, so as to destroy the grass. About the middle of the ensuing February, it should be sowed with clover and oats, as herein-before directed, the ground having been previously properly prepared for the purpose. About the first of April all the locusts should be cut down, the timber removed, and the brush burnt; and now nothing remains to be done but to pursue the directions, in relation to locusts springing up from the stumps and roots of old trees.

To carry out this plan of rearing locusts will require time, and the exercise of patience. But it must be recollected, that during the time the husbandman is waiting for his young locusts to attain a sufficient age to be cut down, he will be annually deriving profitable crops from his land; and, at the end of the process, he will obtain a sufficient number of stakes, and poles for riders, to compensate for all his extra labor. And besides, he will have his ground more regularly set with locusts than could be accomplished in any other way. The roots of locusts extend out laterally to a considerable distance, and sprouts will spring up, sufficiently thick, over the whole ten acres, and stand more regularly than if reared upon the plan before suggested.

But neither of the foregoing methods of cultivating locusts will be practicable in a country where no locusts grow naturally, and hence the necessity of rearing locusts from the seed, in such situations. This is quite practicable. New or second year's ground will answer best for this purpose. If there be none such, land which has been lying in grass for some years may be substituted. It should be prepared by plowing the preceding fall, and pulverising the soil as completely as possible. In this latitude, (39° north,) the seed should be planted late in April. If planted too early, the young locusts will sometimes be destroyed by frost. They are not as tender as beans, but a pretty severe frost will kill them. The earlier they are planted the better, so that they are not endangered by severe frosts. The time of planting must, therefore, be governed by the latitude, and danger of frosts at the place of planting them. When the ground is properly pulverized, it should be checked off, five feet each way. The seed must be dropped and covered like corn, except that it should not be covered more than an inch, or inch and a half deep; and care should be taken to cover them with a light mould.

The seed must be thus prepared for planting: They should be gathered the preceding fall, and kept dry till spring.* Three days before the time of planting, they should be put in a tight vessel, and boiling water poured on them, which should be suffered to remain twenty-four hours; it should then be poured off, and the boiling water renewed, and suffered to remain the same time; boiling water should again be poured on the seed for a third time, and continued as in the two first instances. Most of the seeds will now have burst the hard envelope by which the kernel is surrounded, and they will be in a proper condition to be planted.† Eight or ten seeds may be dropped in a hill to increase the chances of producing at least three plants, but they should be somewhat scattered, to prevent them from being too much crowded, in case many should come up. To facilitate the dropping of the seed, they should be stirred in sifted ashes or gypsum to dry them, and then all the surplus ashes or gypsum sifted out.

Locusts should be cultivated the first year with great care, suffering no weeds to grow, and thinning them so as not to leave more than two or three stalks to a hill. The ground should be left as level as possible, at the close of the cultivation in the fall, and sowed in oats and clover seed in the spring, as hereinbefore directed. Nothing more will be necessary but to protect them from stock, and to thin them out as it shall become necessary.

If planted five feet apart, each ten feet square will contain four hills, and twelve young trees, if three grow in a hill. This will be twelve times as many as will ultimately grow on the ground, allowing one hundred square feet to each tree. It will, therefore, soon become necessary to thin them, and in the course of two years they should be gradually reduced so as to leave but one in each hill, taking care always to leave the straight and most thrifty plants. The balance may be permitted to stand until the more thrifty ones so far overtop the others, as to leave no doubt that they have not suffered so much from insects as the others. By this time many of the young trees will have attained a sufficient size for stakes, and the less thrifty ones may be cut for that purpose, taking care to leave the most thrifty *one* growing upon each ten feet square, as nearly as practicable.

---

* I apprehend seed of any age will answer if it has been kept dry, but I have had no experience on this subject.

† This severe exposure to boiling water may induce an apprehension, that the vegetating power of the seed will be destroyed. Experience has satisfied me, that such apprehensions will be groundless. It only prepares the seed for vegetating quickly, and certainly.

When these shall have attained a sufficient size for rails, say in twenty-five or thirty years, all should be cut down—large and small—as they are needed, *on one side or end of the field*, so that the sprouts may grow from the stumps and roots without being overshadowed by trees left standing. As soon as a part of the old trees are cut and removed, a new crop of locusts will commence growing, and by the time the whole shall have been cut, the plantation will be fenced with rails, which will last from thirty to fifty years. By the time the fencing will require renewing, a second crop of locusts will have grown, that will produce more rails than the first, and thus a permanent supply of rail timber will be afforded from a few acres of ground.

The following estimate will give some idea of the profits arising from the cultivation of the locust. The value of rails, made of the ordinary rail timber, of the better kinds, in the rich lands of Kentucky, may be estimated at three dollars per hundred. Locust rails will last more than twice as long, and consequently may be estimated to be worth at least six dollars per hundred. Three hundred rails, growing upon one acre, will, at the expiration of twenty-five or thirty years, produce seven thousand five hundred rails, and be worth four hundred and fifty dollars. Estimating the rent at three dollars per acre, for thirty years, will be ninety dollars. Allowing the pasturage of the ground, and stakes cut from among the growing locusts, and the branches of those cut down for rails to be a compensation for the trouble of rearing and protecting the locusts, (a very liberal allowance,) and we shall have a clear profit of three hundred and sixty dollars per acre. To this should be added the saving of labor in making and repairing fences with rails of such great durability, compared with the expense of keeping up fences with rails that will last only fourteen to twenty years.

But this is not all. In the fertile parts of Kentucky, where good rail timber is not abundant, it is necessary to keep one-third of a moderate sized farm in woods, to supply rail timber and fuel. A few acres, planted in locusts, after they shall have attained a suitable age, will supercede the necessity of keeping more woodland than will answer for fuel. A large portion of what now lies in forests may, therefore, be converted into arable land, and thus the profit of the farm may be considerably increased.

A Correspondent from Louisiana asks: "Is there no way for destroying the coco nut grass? for by its introduction among us, large fields of some of the best parts of our plantations here become entirely valueless, and are now thrown out of cultivation." During our late trip on the Mississippi, we heard considerable conversation upon the subject, and finally suggested that as swine were very fond of the nuts of this grass, they should be kept in large herds to root it out. Since this, we understand our advice had been anticipated by the practice of several planters for the past two or three years. But Dr. Cartwright, in his admirable letter published in the Oct. No. of this paper, p. 215, speaks of two kinds of the cocoa; the sweet and the bitter. It is the sweet, doubtless, of which the swine are so fond, and as Dr. C. says: "No means have been discovered of extirpating this pernicious repent when it once gets fixed in the soil," we suppose the pigs eschew the bitter and take only to the sweet. Will Dr. Cartwright, or any of our friends at the south, add to their favors, by answering our correspondent, for if swine will not eradicate it, we can hardly divine what will, on account of the great depth of its roots and their tenacity of life. This is a most important subject for an extensive section of the South and well worthy the investigation of the observing and intelligent.

Exchange Papers.—We have received within a short time, numerous applications to exchange with newspapers. This is a losing exchange for us, not from any want of merit in the papers sent, but from the matter they contain not being of use for our own paper.

We shall be most happy, however, to comply with those requests in all cases, although our list is already large, and we suggest a way by which it can be done with mutual advantage, and great benefit to the community. There are, as nearly as we can *guess*, and *guessing* is the only means for *estimating*, not to exceed 80,000 copies of *agricultural papers* circulated in the United States; and of these, at least one-fourth are taken as duplicates, which will reduce the number of subscribers, of these *invaluable farming papers*, to the low number of 60,000.

In our population of 17,000,000, we ought to have, at least, one eighth, or 2,000,000 subscribers, to some purely agricultural periodical. *The field then is not one thirtieth occupied.* This statement suggests the mode of a mutually beneficial exchange. Let each one of our Editorial brethren procure for us as many subscribers as possible, from one to twenty, or, a hundred will be more satisfactory, deduct the commission allowed, and remit us the money through the post office. By this simple process, he will "do the state some service," and "put money in our purse," both reader's and editor's, but the Lion's share, will go to the farmer's.

We have received two letters from Thomas Bates, Esq., of Kirkleavington, England, together with the packages of papers. We make some extracts from the former.

"I sent nothing to Bristol this year, (meaning animals for exhibition at the annual meeting of the Royal Ag. Society,) the distance being so great. The show of Short Horns there, was indifferent. The Devons were numerous and good, Herefords also, and Long Horns, the best show that has yet been of all those tribes. The meeting went off finely, and the American Ambassador was enthusiastically received, and acquitted himself well. It was indeed a mutual congratulation, and must give great satisfaction to your country as well as this.

"In this paper (the London New Farmer's Journal,) also will be a full account of the York Show, on Wednesday last, by far the largest show of any in England, and the animals made up most extravagantly. I sent the Duke of Northumberland there, and his dam Duchess 34th. He is the eldest of her eight calves, and she herself only nine years old, and has passed through more casualties than any animal I ever knew, (had a leg broken at two years old, and other accidents subsequently,) and yet the judges could not get over giving her and her son the highest premiums, as the best bull and best cow. Mr. Booth's cow, that got the premium at Bristol, was placed second. She was sister to the one shown at Liverpool and Hull, last year, and was also at Berwick; the cow of last year was also at the show yard at York."

Several English correspondents we replied to, privately, by last steamship, and have since executed their orders.

The letter and cut from George Vail, Esq. was received after our matter was made up. It will appear in our next.

BOY'S DEPARTMENT.

"All work and no play, makes Jack a dull boy," is a homely adage, but a good one. A most estimable and energetic clergyman, himself a self made man, and the successful tutor of some of the most efficient public men now in active life, used frequently to say, on the exposure of some of the mischievous tricks his graceless students were constantly plotting, "it was the hardest thing in the world, to put a man's head on a boy's shoulders;" if it could have been accomplished, it would have proved the most foolish; for it's very likely the head and shoulders would have changed places at manhood. To adapt the occupation to the capacity, both of mind and body, is the only true science, in the education of youth of both sexes, and all conditions. There is an instinct and nature, inbred and inherent, in every human being, and to mature and bring out this seminal principle to its fullest capacity, it is not necessary to thwart nature, but to guide it; not to engraft new and unknown elements of character, but to draw out and mature, discipline and direct, such as are already implanted. With each and every one of them, there is the germ both of good, and evil, and the ornament or disgrace they are to prove to their race, depends as to which of these opposing principles predominates. We daily witness, from apparently the same original materials, but subsequently subject to different influences, the most opposite results of character; the most exemplary, wise and good on one side, and the most profligate, depraved and hardened on the other; saint and devil issuing from the same stock, and maturing their most luxuriant fruit from the same soil. We deem it not among the unimportant matters of good husbandry, that some rational employment be afforded the young folks, suited to their dignity and importance, and calculated to awaken their zeal and elicit their genius; and while the parent is employed with the improvement of his cattle, and horses, and sheep, and swine; and applying the principles of Tull and Davy and Liebig to his tillage and crops; he must give the boys something to bring out the resources of their young minds. And if he can't find something to interest and improve them, they will either stultify or deteriorate; the last being altogether the most probable result, for evil influences are always sufficiently abundant to enlist the idle urchins that are waiting for employment. Standing still with any reasonable degree of intelligence, is out of the question, when once on the track of life, the being must go forward to fulfil its destiny. The course to be followed out is frequently determined in childhood. How important then to give this the right bias. The slightest, almost imperceptible divergence of the curve, if pursued gradually, leads to a course directly opposite from the starting point.

To implant in the breasts of our young readers, some of the fascinations of the pursuit of nature in her varied operations, we shall occasionally give them a field of their own to occupy, and to begin with, shall offer them some choice directions for selecting, rearing and managing the various breeds of pigeons. And we must insist, that in this, the boys shall have pretty much their own way. The parent may advise occasionally, but not direct. Let the youngsters have all the responsibility, and our word for it, if they have a fair field, they will hereafter prove troublesome competitors on your own ground whether it be Short Horns or South Downs, or whatever your hobby happens to be. Billy Gray claimed as much merit for drumming well while a lad, as for his conspicuous success as a merchant in mature life, and the mother of Washington, in reply to the eulogium of Lafayette on the splendid career of her soldier son, said very meekly but comprehensively, "ah, George was always a good boy."

Cobbet says, "It is not supposed that there could be much profit attached to pigeons; but they are of this use. They are very pretty creatures; very interesting in their manners; they are an object to delight children, and to give them the early habit of fondness for animals and of setting a value on them, which, as I have often had to observe before, is a very great thing."

The Stock Dove, or original of the pigeon genus, according to Buffon, in its natural or wild state, is thus described: "with a fine neck of a reddish gold color, its wings marked with two black bars, one on the quill feathers, and the other on the covert; the back white, and the tail barred near the end with black." The Ring Dove is yet held by naturalists to be distinct from the Stock Dove, and it would seem that the Turtle Dove is equally so from both. In this country the Blue Dove (house pigeon) is the most common, and the only species of these are the Ring Doves, or wood pigeons, and the Turtle Doves, which are to be found in all parts of Southern Britain, breeding during the spring and summer, and retiring to the deepest recesses of the woods in the winter season, whence, probably, the Turtle has been supposed to emigrate. I am assured by a Spanish gentleman, that in Barbary they have pigeons equal in size to fowls, but incapable of flight.

Throughout the woods and plantations on the domain of Warwick Castle, the Turtle Dove abounds in multitudes, flying in pairs, and lighting on the turrets of the castle. Their loud and mournful cooing is heard on the road at a considerable distance. Much pains have been taken, hitherto ineffectually, to reduce their numbers.

Both in the ancient and modern world this beautiful and variegated genus of birds has been cherished by man as a source of amusement and gratification to the eye, as well as profit, in the article of provision for the table. Besides it was reckoned by certain nations of antiquity unlawful to deprive them of life. The useful qualification of Messenger, appertaining to the Asiatic and African species of the pigeon, is of great antiquity: and we read, in the time of the Crusades, of an Arabian prince who had a sort of telegraphic communication kept up in his dominions through the medium of pigeons, that carried letters, and were regularly relieved at appointed posts. From these, doubtless, the breed celebrated in Europe under the name of the Carrier has proceeded. In modern times, those varieties which are kept for the purpose of amusement and show, are styled Fancy Breeds, and they form a distinct article of commerce in cities and great towns, the varieties, as they chance to be in fashion, bringing a considerable price. From the earliest times the pigeon fanciers of London have had a club, in which premiums are awarded, and the notable science of the fancy, through the method of crossing colors and forms, is promoted and perpetuated. The chief objects of the fancy have hitherto been those varieties styled Almond (probably ermine,) Tumblers, Carriers, and the birds with great crops, the most fashionable variety of which is the Pouting Horseman. The spescific merits of these breeds are indicated by their names. The tumbler exercises his faculty in the air, but is chiefly valued for his peculiar form and variegated plumage. The Carrier, as a messenger, cuts the air with almost inconceivable swiftness. This is the columba tabellaria, the famous carrier, or messenger, between Aleppo and Alexandria in Egypt. The Pouter extends his crop to a size attractive to curiosity, and by his grotesque attitudes and familiarity with man, engages his attention.

It would be useless to assign a reason why one particular breed out of so many species should alone possess the peculiar knowledge and instinct of the Carrier. We must content ourselves without diving too far into the hidden mysteries of nature, and ascribe that wonderful facility to the same Power that guides the swallow and other birds of passage across the waters of the Atlantic to our shores, or conducts them, each succeeding spring, to the same spot where for previous seasons they have reared their young.

Tumblers by their flight are a source of great enjoyment to the fanciers, for in addition to their tumbling they will rise to so great a height in the air as to appear like a speck, or become altogether imperceptible. If of a good kind, and well familiarized to one another, they will in their flight keep in so close company that a dozen of them may be covered with a handkerchief. If the weather be fine and clear, they will keep upon the wing for four or five hours at a time, the favorite set seldom or never tumbling except when about to rise, or when coming down to pitch.

Tumblers show in their plumage an endless variegation of shade—reds, yellows, blues, duns, blacks, whites, and silvers. No expense should be spared at first for the purchase of two or more birds accustomed to very high flying, as they will be of infinite use afterwards, in teaching the young ones to be lofty soarers. After the pigeons have been accustomed to their habitations, they should be turned out only once a day in a clear grey morning, when there is neither mist nor wind, taking care to spread out for them on their return a plentiful repast of rape or canary seed, to entice them home, and afterwards shutting them up for the rest of the day. They should, for an obvious reason, be closely confined when with egg.

The Carrier was called by some of the old fanciers, the King of Pigeons. It is remarkable for the fleshy protuberance called the wattle on the lower part of the head. These triple properties have been enumerated as indicative of its excellence—three in the head, three in the eye, three in the wattle, and three in the beak. The head should be flat, straight, and long; the eye broad, circular, and uniform; the wattle broad across the beak, short from the head to the bill, and leaning forward; the beak long, straight, and thick. Pigeon jockeyship sometimes has attempted to imitate these qualities artificially, and to palm upon the inexperienced inferior birds at the price of the best. The length and thinness of the neck are marks of its elegance.

The *Horseman* is supposed to be a bastard between the Tumbler and Carrier; they are chiefly used at present for deciding bets, and carrying letters, the pure Carrier being so exceedingly scarce.

Dragoons were originally bred between the Horseman and Carrier; they are very strong and useful birds; being prolific breeders, and good nurses, they are frequently kept as feeders to rear young Pouters, Leghorn runts, &c. For a distance of fifteen or twenty miles, the Dragoon is said to be more rapid than the Horseman, but cannot keep up its superiority in a longer flight.

Toho, in the New Sporting Magazine for June, 1839, says:

"The first property of a Carrier is the length of their flight or wing feathers, and the distance or length from the base of the bill to the end, which should always taper gradually. The color is the next, and though fanciers disagree on this point, I prefer a blue to any other, as I have generally found them hardier and swifter than the blacks or duns, but, like dogs, good pigeons are to be found of all colors. Firmness of feather always indicates a good constitution. The age may be guessed by the size of the wattle, and the heavy appearance of the bird.

"The Antwerps are a later introduction into this country, and their name bespeaks their origin. I believe little was known of them before the famous Antwerp match in July, 1830, when 110 birds were tossed from the yard of a noted fancier in the Borough. The first bird reached Antwerp, a distance of 186 miles, in five hours and a half, and gained the gold medal; out of the 110, about 100 reached home. To the eye of any one who has been solely accustomed to the English Carrier, they possess but little recommendation, but the fancier soon detects the points of speed and beauty, in the fine and lengthy shape of the bird. They are of many colors, but I have found none better than the nearly reds and blues. This bird, in my opinion, is equal to the Horseman in sagacity and speed, and altogether, I prefer them to any other kind.

"The pigeon loft should always, if possible, face the west or south, be high and roomy, with railed pens to shut in birds for matching in the spring, or other purposes, kept well lime-washed, which will both destroy the insects, and keep it cool, and it should be repeatedly cleaned out. A glass tile or two in the roof, if it is a slanting one, will be useful to light the loft.

"There must be a railed trap projecting in front, so that the birds may go out from the loft, and the front of the trap will let down and pull up, by means of a spring inside. This is the dormer, and in most large lofts is out of the top of the roof. When the trap is shut, the birds will come in at the wires, which open inwards to the loft, on a pivot, which is called the bolting wire.

"After they have become well accustomed to the loft, and are able to keep pretty well with the flight, take them about half a mile from the loft in a bag made of coarse canvass, to hold two birds, with a little straw, and toss them; repeat the same distance for a few days, and gradually increase it up to five miles. After this they are pretty perfect, and two or three miles may be added to the distance every day. If your loft be near a high road, a great advantage will be found by giving the birds to the coachmen to toss. There are many ways of marking birds. I generally make a little notch in the beak or between the toes, in the same manner as game fowls. A little stamp with the initials of the name, to mark them in red on the tail and pinion feathers, will be useful till the birds moult. In tossing a bird, always clear its wings and feet, and holding it round the body and legs with one hand, throw it well up,—never near any trees, as the young ones will frequently perch and there remain.

"The speed of the Carrier has perhaps never been ascertained. I have had them come seven miles, by the *road*, in five minutes, and forty miles in the hour is generally done; but too much depends upon circumstances to give any opinion.

"If a bird is going to do a large distance, it should never be over-fed the night previous, but shut up in a dark pen. If possible, choose a clear day for tossing, for nothing beats pigeons like wind and fog. A real Carrier will seldom stop till he reaches home. If they are regularly flown, well fed and watered, and kept clean, few diseases will be known in the loft. Let them have a large tin pan to wash in, change the water every day, and a lump of salt to peck at.

"The canker in the wattle is their worst disease, and frequently arises from dirt or from the birds fighting. The best cure is a piece of bitter aloes of the size of a pea, given inwardly, and the day after wash the wattle with warm water, and in the evening wash the sore with lead ammoniac and burnt alum, mixed with lemon juice, till cured. Tobacco smoke will be found useful to clear the loft from vermin.

"The *Pouter* is a very common but most interesting bird. It is remarkable for its local attachment, and although not a good breeder, and exceedingly apt to degenerate, it is very useful about the pigeon-house, by leading the other birds to form a stronger house and home. Some of them can distend their crops to a very great size, so much so as frequently to overbalance themselves. By judicious crossing and patient perseverance, some fanciers have brought these birds to so high a point of perfection as to sell them for twenty guineas a pair. They are very bad nurses, and it is difficult to rear their young without the aid of the Dragoon. When a Pouter has laid an egg at the same time with a Dragoon, they should be carefully transferred from the one to the other, it being necessary to allow the Pouter to sit, otherwise she would continue to lay, which in a short time would cause her emaciation and death. If bred in and in, they quickly degenerate and become worthless, new kinds must therefore be got by purchase or exchange, to prevent the deteriorating effects of too close a consanguineous connection. The contrary is the case with the Almond Tumbler, which, the more it is bred in and in, only diminishes in size, and is accordingly enhanced in beauty and value.

The *Fan-tail* is a very beautiful bird, sometimes, on account of its frequent tremulous movement of the neck, called the Broadtailed Shaker. When perfect, its tail consists of not less than twenty-four or more than thirty-six feathers, which it keeps spread and always erect, for if they are but for once allowed to drop, it is a fault never overlooked and never forgiven. A very slender-necked, full-breasted, and large-tailed bird, carrying the latter gracefully, is of very great value. The plumage is agreeably white, but there is also a great variety of colors.

The *Jacobine* is a bird very scarce, and difficult to be found of a good sort. It is sometimes called Jack, and is a very small bird. It has a range of inverted feathers on the back of the head, somewhat resembling in form the cowl of a monk, or the ruff of a cavalier, and hence its name. This range of feathers is called the hood—and the closer and more compact it grows to the head the greater is the value of the bird. The lower part of what is called the chain and the feathers that compass it, should be short and thick. There is a great variety of color among them, but the yellows always obtain precedence.

Besides these we have enumerated, an almost endless variety of names has been given to some where the shades of difference are very slight. With these the young pigeon-keeper should have as little to do as possible. Even with the commonest assortment he can buy at the market or from a companion, he will soon have a sufficient variety, and many to please his eye with sufficient beauty; and if it is necessary to assign them names, he can easily baptize them himself without consulting the vocabularies of the London fanciers.

Plucking *one* of the wings of old strangers to induce them to haunt or to prevent them from their vagabondizing propensities, sometimes manifested by old inmates, is better than cutting, as their power of flight comes on gradually as the feathers grow, and they become familiar with and fond of the features of the locality within a limited range of which they have thus been for a time confined. We have almost always seen this mode succeed in our own experience, although the reports of others all tend to the superiority of endeavoring to haunt young in preference to old birds, which is certainly surer and safer, but the other may also be tried, as the old ones may begin to breed as soon as their wing is grown, which only takes about a month, whereas six times that period must be waited for before eggs can be expected from the young ones. If a hen happens to be lost, it is seldom that the cock remains long behind,—but the very contrary happens with the loss of the cock. The hen sets out in search of a mate, and she will soon be seen wiling a male companion—widowed in all probability in some other dovecote—homeward to her own residence, where they speedily pair.

SELECTIONS.

A Brief Sketch of Robert Bakewell, Esq.

Memoirs of *utilitarians* are very seldom written. The quiet tenor of their lives, unlike the glare of that which sheds a halo around the heads of the warrior and the statesman, affords but little field for the display of the talent of the biographer: hence it is that the real benefactors of mankind are but too frequently passed over in silence, and we walk over the green sward that flourishes where the remains of those whose energies were devoted to the improvement of the race of animals, that contribute largely to add to the creature comforts of man, moulder into primitive dust, without even thinking that we tread on hallowed soil; for the earth beneath which a good man rests, is hallowed by the remembrance of his virtues and his usefulness.

Mr. Bakewell, who was the pride of the agriculturists of the last century, and justly celebrated for his improvements in the breeding of long-horned cattle and sheep, has been strangely neglected by those who ought to have been his warmest and most grateful advocates. But such is the way of the world: neglect, almost universally, is the reward of merit; and it is but too frequently the case that an *usurper* gains the prize, while the *real* utilitarian is thrown into the background of the picture. It is our wish to pay due honor to the memory of Mr. Bakewell, and, scanty as our materials are, we will endeavor to add one more laurel to the wreath which so justly encircled his brows; for

"He lived and died beloved, and deeply mourned" by a circle of friends who now, like him, are "food for worms."

The man who is the benefactor of the human race has a right to expect to live in the memories of posterity. Mr. Bakewell will do so, and although this tribute to his memory comes somewhat late, it will, at least, be appreciated as an offering at the shrine of honest merit.

Robert Bakewell was born at Dishley Grange, in Leicestershire, in 1726. The farm of Dishley Grange had long been in the possession of his ancestors, and those from whom he more immediately descended held the property on a lease of ninety-nine years from the family of Phillipps, of Garrendon; it having been purchased in 1693 by a Sir Ambrose Phillipps, by whom it was leased to the forefathers of Mr. Bakewell. The term of the lease expired very shortly before Mr. Bakewell's decease; and the farm, which consists of about 457 acres, then came into the occupation of his nephew, Mr. Honeybourne, who resided upon it until he died, which was about twenty years after the demise of his uncle. But with Mr. Bakewell, Dishley lost all its importance, and his successor failed in becoming even a shadow of the great practical man who had been its previous proprietor.

The Bakewell family would appear to have been long settled at Dishley, as in the chancel of Dishley Chapel, where the remains of this celebrated man lie interred, are deposited the bodies of his father, Robert Bakewell, who died in 1773, in the 88th year of his age; and also that of another Robert Bakewell, probably his grandfather, who died in 1716, at the age of 73. Mr. Bakewell himself ended his valuable life on the 1st of October, 1795, at the age of 69—too early for "his country's good."

Perhaps, during the last century, no man did so much towards increasing the agricultural interests of the country as Mr. Bakewell. He was unwearied in his exertions, and enthusiastic in bringing to perfection his favorite pursuits. In every branch of the science he was persevering to the end; and by strenuous exertions made himself master of the different modes of cultivation pursued not only by the English farmers, but also those of Foreign cultivators. He did not content himself with the mere knowledge which he had thus laboriously and industriously obtained, but he introduced that system into his own farming practice which is now generally pursued in Leicestershire.* But the great glory which is attached to the name of Robert Bakewell is in the vast improvements which he made in the breed of cattle. The different nations of Europe supplied him with the materiel, and Nature herself might have wondered at the skill which he displayed in bringing her works to a greater degree of perfection. It was from Flanders that he principally procured his famous breed of black cart-horses, now nearly, if not quite extinct, which have been thus described. They were lighter-legged and flatter-boned than those now in use, but of great strength, more especially in their fore-quarters, with erect heads and fine crests. One of this breed was of such excessive beauty of proportions, that he was likened to the fancied war-horse of the German painters. He must indeed have been a splendid and picturesque animal, for a man of moderate height seemed to shrink under his fore-end, which rose so perfectly upright, that his ears stood, (a qualification that Mr. Bakewell deemed indispensible to the beauty of a horse,) perpendicularly over his fore-feet. This animal was the entire horse which Mr. Bakewell christened K,† and which was perhaps one of the most elegant creatures of his class that was ever bred within the British dominions.

Mr. Bakewell was allowed to be the first breeder of horses of the age in which he flourished; and King George the Third, who claims the honorable distinction of adding to his regal titles that of being THE FARMER'S FRIEND, particularly distinguished him by his notice and approbation. This conferred honor both on the Monarch and the subject, for it is unfortunately now too much the fashion to neglect the agricultural interests of the country. A horse which Mr. Bakewell submitted to the inspection of his Sovereign, and which was afterwards publicly shown for some months in London, was "the meanest of the breed;" yet its symmetry was beautiful, and its form not deficient in utility; it was, in fact, a picturable animal.

Mr. Bakewell had too much good sense to keep useless stock; he made even his mares work in the team, but they were treated as gently as a man would treat his wife, and the use of the whip was entirely prohibited at Dishley.* It is somewhat unfortunate that this fine breed should have been superseded by a heavy-legged race whose movements are snail-paced, and decidedly inferior for agricultural purposes. Is there no one among our friends who would devote his attention to this important subject;

The pride of Mr. Bakewell was to improve the class of domestic animals, and his celebrity as a breeder of long-horned cattle will ever shed a halo over his name. It appears he selected the finest individuals of the Warwickshire species, principally from the herds of Mr. Webster, near Coventry, and Mr. Fowler, of Rolwright, which, being crossed with the most excellent of the Lancashire breed, produced a stock of cattle that was held in the highest estimation for a considerable time; but fashion varies, even with respect to animals, though the Dishley breed was kept up for some years after the death of Mr. Bakewell, by Mr. Paget, of Ibstock, Mr. Astley, of Addeston, and to a more recent period, by Mr. Huskisson, of South Croxton; though when a sale of the latter gentleman's stock took place, about thirty years after that of Mr. Paget's, there was a great depreciation in the intrinsic value of the cattle, although they were allowed to be some of the best and purest specimens of the Dishley herd. We cannot give a better proof of the value that was attached to this breed than to attach the prices a few of the lots fetched at the first day's sale of Mr. Paget's stock on the 14th of November, 1793:—

		Guineas.
Lot 8	Short-tail, by Shakspeare	38
9	Eyebright, by a bull bred by Mr. Varnam	51
14	Strawberry, by a Dishley bull	31
16	Brindled Eyebright	33
26	Penn	35
29	Young Dandy	30
30	Brindled Finch-Tidy	29

At this sale the famous bull, Shakspeare, which was bred by Mr. Fowler, by Shakspeare, *peré*, out of Young Nell, fetched 400 guineas, to which the seller appended the condition that he should have the privilege of having the use of him for two cows yearly. The heifers by this animal also sold well, one two-years old, realising 84 guineas, and another, one year older, 70 guineas. Mr. Bakewell preferred rearing small-boned cattle, and considered them to be in every way the most profitable, both to the farmer and the consumer. He also strongly recommended great attention being paid to the quality of the cows intended for breeders, and justly remarked that, when a sound discretion was not used, the produce often failed, and then the bull was frequently unjustly blamed. He was exceedingly particular in his own selections, and he prized his favourite bull, called Two-penny, so highly, that he refused 200*l.* for him; and he appears to have been somewhat choice of his produce, for he rarely sold any of them, though he let them at high prices for the season.*

---

* In Mr. Nichols's valuable work, "The History of Leicestershire," honorable mention is made of Mr. Bakewell. We are there told, at the time that work was compiled, that "he worked the drill and horse-hoe as they are now used; and the identical implement with which he drilled his grain and his turnips, was then used in the neighborhood, and by the same person who worked it upon Mr. Bakewell's farm in his life-time."

† Of this breed Mr. Bakewell used frequently to let out his entire horses for the season, for the sum of 150 guineas each.

* These mares were valued, about the year 1785, at 30*l.*, 40*l.*, and 50*l.*, each. The famous Corinthian Bulls, which are described as being wonderfully beautiful, and symmetrical in their proportions, are made to do all the heavy work on the rich land that is termed the *Terra Firma* of Italy. Their color is described as being, generally, a bluish roan; horns long, tapering off to a point, white as polished ivory, and finished with a bright black tip at the end.

Celebrated and excellent as Mr. Bakewell's breeds of horses and cattle were, still more so was his breed of sheep. Perhaps at no period of time, certainly not in his, was such an improvement made in this valuable animal. In the present day cultivators of flowers are continually producing new species, but Mr. Bakewell was before-hand with them, for he may truly be said to have been the producer of a new variety of sheep. Combined efforts frequently produce great improvements; for practical men, by condensing their energies into one focus, may bring forward important results. But Mr. Bakewell's was a master-mind; his own skill and genius overcame obstacles that to others appeared to be insurmountable; and his long-woolled sheep became the pride of Leicestershire. It was entirely his own work, and the time he took to complete his wonderful improvement was incredibly short. In our day the South Downs have been brought to the highest state of perfection by Ellman, Grantham, Webb, the Duke of Richmond, and others, the superiority of whose flocks do honor to the agricultural interests of the country; but they were brought to this state of perfection by the union of several parties: Mr. Bakewell stood alone, and to him we are solely indebted for that beautiful and useful animal, the new Leicester sheep.

It was not on a sudden that Mr. Bakewell attained his high celebrity as a sheep-breeder. It is recorded of him that the first ram he let out he drove himself to Leicester fair, and obtained only 16s. for the use of him for the season. About 1760 his rams did not sell for more than from two to three guineas each, and after this time he did not receive for their hire more than from 15s. to a guinea per head. He now gradually advanced his terms, and in 1770 he let some of them for 25 guineas. Mr. Bakewell used to tell an anecdote respecting the difference of judgment in respect to the value of cattle. He was once attending Loughborough Tup-market, where he had a ram which he had let for 25 guineas. Soon after the agreement was concluded, another farmer offered to purchase the animal, and Mr. Bakewell jestingly fixed the price at 25s. The farmer considered this too much, and offered 18s., and eventually they parted for 2s. This was something on a par with the judgment of some Leicestershire farmers respecting a heifer which had been purchased for 80 guineas, and which they, a few days after-priced at 8*l*. This may be considered as the first dawning of his fame and fortune. The reputation and prices of his stock so rapidly increased, that in a very short time 400 guineas was given for the use of a ram for the season. One, called the Two-pounder, produced him in one season 800 guineas, besides the produce of his own ewes that were put to him, so it may be fairly calculated that the profits of the produce averaged him 1,200 guineas for one season.

The ardent mind of Mr. Bakewell was first brought into action about the middle of the last century, and from that time we may date the improvement of the Leicester sheep. About that period he engaged John Breedon for his head shepherd, and it appears that he soon became his confidant. There is little doubt that he entered actively into his master's plans, for he had the entire control over the formation of the new breed, under the direction of Mr. Bakewell, but they kept the manner in which it was accomplished a profound secret.* This seems somewhat strange, as Mr. Bakewell was a liberal minded man, and in after years the knowledge of his process might have been of essential service to his country. But his whole mind was devoted to the science in which he had engaged, and while he was practically working out his plans, it is probable that if any of his schemes proved failures, he wished them to be kept as secret as possible. In this he acted wisely, for too frequently the observations of "good natured friends" tend to damp the spirit, and check the energies of a man who risks his reputation on the success of his experiments. Hence it is that we are so little acquainted with the crosses he used to form his beautiful flock. Conjectures have been various: some have considered that the principal crosses he made were between the old long-woolled Leicesters, and the ill-formed animal that in those days fed upon the grassy hills of Chorwood forest; but, after all, conjecture is not proof. It may be taken as a fact denying dispute, that all his crosses were made from the best individuals of the different flocks, and these he in all probability, crossed again with some of another breed. His great object was to gain the greatest weight of meat upon the smallest quantity of bone, and to combine this with symmetry of form, early maturity, fine quality of flesh and a propensity to fatten. Some breeders consider the size of the animal to be too small, but Mr. Bakewell's opinion was, that a greater quantity of mutton would be procured from a given quantity of acres, grazed by a larger number of small sheep, than from a smaller quantity of larger animals possessing less appetite.

Arthur Young, who is no mean authority, informs us that Mr. Bakewell was very curious in the breed of his sheep, and he considered both his rams and his ewes to be perfect specimens. He describes their appearance thus:—"Their bodies are as true barrels as could be seen—round, broad backs, and the legs not above six inches long; and a most unusual proof of kindly fattening is their feeling quite fat just within their fore-legs on the ribs—a point in which sheep are never examined in common, from common breeds never carrying any fat there. In his breed of sheep he proceeds exactly on the same principle as with oxen—the fattening in the valuable parts of the body, and the living on much poorer food than other sorts. He has found from various experience in many parts of the kingdom, as well as upon his own farm, that no land is too bad for a good breed of cattle, and particularly sheep. It may not be proper for large stock, that is, large-boned stock, but undoubtedly more proper for a valuable well-made sheep, than the usual wretched sorts found in most parts of England on poor soils, such as the moor sheep, the Welch ones, and the Norfolks; and he would hazard a moderate stake that his own breed, each sheep of which is worth several of those poor sorts, would do better on those poor soils than the stock generally found on them; a good and true shape having been found the strongest indication of hardiness."

According to Mr. Young, the breed of the sheep was originally Lincolnshire, which was wonderfully improved by Mr. Bakewell; and another person, who visited Dishley in 1790, informs us that he was likely to make by his tups that season fully to the amount of 3,000 guineas. But notwithstanding the large amount of money that Mr. Bakewell was in the habit of receiving from the proceeds of his stock, at the very noontide of his fame he became involved in great pecuniary difficulties, which would not appear to have been brought on entirely by the expenses he bestowed on the necessary experiments for perfecting the improvements of his flock, but from the large number of visitors that congregated together at Dishley. Several of the principal of our nobility were frequently his guests, and Mr. Bakewell, whose disposition was as liberal as his mind was noble, entertained them in the same expensive style as they were accustomed to live in themselves when at home. This, of course, increased the expenses of his establishment enormously, and the host of Dishley Grange might truly have told some of his guests, as the Lady Rendlesham once remarked to the last Duke of York, when he took his leave, that Rendlesham House was considered to be the best inn on the road. It was also an unfavorable period for making money by the cultivation of land: the war with America had considerably reduced the value of produce, and the article of wool, which was of the utmost importance to him, was so greatly depreciated, that it was sold as low as nine shillings per ton. All other articles being also proportionably reduced, his expenses great, and his hospitality unlimited, it cannot be wondered at his finding himself in difficulties. But even then Bakewell kept up his high position, for when his stock was valued(the unexpired term of his lease being included in the valuation), there was a balance in his favor of from 1,500*l.* to 2,000*l.* From documents that may be considered of the highest authenticity—the valuations that were placed in the hands of his trustees at that time—we will make an extract to show the prices at which a portion of his sheep were estimated:—

---

* Mr. Bakewell had, at Dishley Farm, several carcases of the different breeds preserved whole in pickle, which distinctly shewed the thickness of the flesh and fat, and also the smallness of the offal. He had likewise skeletons, with distinct portions of the bones, heads, ribs, &c. of the animals.

* Probably the invariable custom of Mr. Bakewell not to engage his servants for a term of less than four years, might have contributed to prevent the secrets of his system being known. The well-used servant naturally becomes attached to his master, and the honest one will never betray the confidence that has been reposed in him.

26 Ewes and lambs, £81 18s.; 19 Ewes and lambs, £99 15s.; 6 Shear-hog rams, £42 10s.; 6 Ewes and lambs, £31 10s.; 26 Theavs, £109 4s.; 10 Shear-hog rams, £200; 10 Shear-hog rams, £260; 3 Rams, £50; 3 Rams, £300;

From the same document we find the sums that some of his long-horned beasts were valued at.

One red cow and cow-calf £35, one cow and bull-calf £50, one cow and cow-calf £40, one two-year-old bull £70, one red cow and calf £40, one cow and calf £60, one cow and calf £35, one cow and calf £30, one cow £30, one cow and cow-calf £30, one bull £20, four bulls £105, three cows £150, three cows £60*

As a practical farmer Mr. Bakewell attained great celebrity. He was in advance of the age, and we may say full half a century before any of his neighbors. It may be questioned if the land in Leicestershire is even now so well cultivated as Dishley farm was when its possessor died. He adopted the system of irrigation, and turned a small rivulet that flowed along a portion of his farm to such good account, that from it he contrived to water from 60 to 80 acres of meadow-land every season. He turned this little brook also to other useful purposes, making it to feed a mill, and save the trouble and expense of carting his turnips, which, being thrown into the stream, were allowed to float down with the current to the barn end, where their further progress was impeded by a grating at the bottom of a reservoir, from which they were taken out and laid up. clean and freight free, for the winter's supply. The idea was beautifully simple, and eminently useful, but Mr. Bakewell possessed a mind that was continually devoted to the improvement of rural affairs. He pursued the drill system of Tull, never sowing broadcast: both grain and turnips he always sowed by the drill, and kept the ground clean by the horse-hoe. There was a striking contrast also in his system of ploughing and that of his neighbors. Some of them employed from four to seven horses at the plough on a sandy loam soil, and then did not turn up much more than half an acre per day. Mr. Bakewell invariably confined himself to a pair, and stirred up an acre with ease, thus quadrupling the quantity of work done with an equal portion of strength. Dishley, in fact, was a school of practical agricultural reform, and it appears rather wonderful that the system was not generally adopted by the Leicestershire farmers. It is not now unusual in that county to see a string of four or five horses attached to the plough. For a long time the drill system also met with considerable opposition, but within some few years it has been looked upon in a more favorable light. Cultivators naturally look to the amount of profits that are likely to arise from the practice of any separate system; that of Mr. Bakewell did not place him among the wealthy, but had he been less liberal in his ideas, less given to hospitality, less visited by the patrician portion of the community, who entailed enormous expenses upon him, he must have lived and died a rich man, whether it was his desire to do so or not. It does not follow that a system must be erroneous because it does not at once open a mine of gold to fill the pockets of the inventor. Every system must have time to work, and every effort at improvement deserves, and ought to receive, the strictest attention. A practical agriculturist is of far more value to a nation than even a practical manufacturer, for the benefits the one confers upon the human race are lasting—the other but transient; yet both deserve to be honored by their country.

Dishley Grange was not exactly what a fashionable auctioneer would term " one of Nature's most favored spots," but under the care of Mr. Bakewell, it became more noted for its usefulness than its beauty. Clumps of willows were planted for ornament and shelter, which were carefully cut every seven years, and the wood thus supplied was brought into use to make handles for rakes, and other purposes of husbandry, manifestly causing a great saving of expense. Even the peelings of the willows were not thrown away, but by the direction of the master hand, were applied to make the bottoms of the sacks. Swampy as the grounds adjoining the house were, Mr. Bakewell contrived to make even their barrenness available

The gardens were cultivated rather for utility than for show; the fish ponds were always kept well stored, and even the drainings from the yard were conveyed to the brook, and thus, mixed with the water, used for the purpose of at once irrigating and manuring certain fields belonging to the farm.

It ought to have been remarked that the liberality and high-mindedness of Mr. Bakewell never evinced itself more fully than in his incessant application to the improvement of the Dishley estate. He was but a tenant, but he yearly increased the value of the land he rented for the benefit of the landlord. He stood forth as a model for all practical farmers to study; an example for all honest tenants to follow. He was indeed a man of rare merit, and it would perhaps be difficult to find his fellow. But, like almost all men who have benefited and enriched their country, and increased ten-fold the wisdom of posterity, by the most important discoveries in arts, sciences, and agriculture; Bakewell has been allowed to rest without even a monument to his memory. He devoted his energies to the good of the public; his own immediate interests he disregarded, without once thinking that future ages would have cause to pay the greatest veneration to his memory. He may be said to have been the first agricultural patriot, for the man who endeavours by incessant exertions to improve the animal creation, is fully as deserving of that distinctive appellation, as is the statesman whose exertions are employed for the perpetuation of the rights and privileges of his fellow countrymen.

---

* Old Comely, the parent mother of all the above stock of cattle, lived to the age of 26 years. When killed, the fat on her sirloin was four inches in thickness.

We are proud of being able to pay this slight tribute of respect to the memory of a great and amiable man, who by his genius has created and scattered over the green hills, and verdant meadows of his native land, an animal whose beauty and usefulness will ever be a living monument to record his name. To him the English agriculturists owe an imperishable debt of gratitude, and we will conclude with a quotation from Arthur Young, who says, " Let me exhort the farmers of this kingdom to take Mr. Bakewell as a pattern in many points of great importance; they will find their account in it, and the kingdom in general be benefited not a little." The prices which some of the Ewes of the Dishley breed fetched, belonging to Mr. Paget. when sold by public auction on the 16th of November, 1793, were from 16 to 62 guineas each.—*Lon. Far. Mag.*

ON THE COMPARATIVE MERITS OF OXEN AND HORSES FOR FARM WORK.—At the Gloucester, (England,) Farmers' Club, a member " stated the result of four years' experience, whereby he was convinced that, for field labor, with the exception of carting, oxen were superior to horses. He found that a team of four oxen could plow as much, and with as much ease, as three horses could; the cost of the former not exceeding 12*l.* per head, while the latter would cost 25*l.* per head. The cost of maintenance was decidedly in favor of the former, for while his horses cost him 7*s.* per head per week, his oxen did not cost him more than 4*s.* He usually began to work his steers when they were two years and a half old, and found them capable of plowing an acre a day throughout the year, if required; and setting aside the saving in the first outlay—maintenance, harness, and attendance—which was very considerable, the sale of the oxen produced on an average a profit of 4*l.* per head per annum. He therefore strongly recommended that on all arable farms requiring two or more teams, one-half should be oxen. By so doing, not only would a profit be received, but a much greater advantage would be conferred on the country by having to sell that stock, which, when fed, makes the best of all animal food—good beef—instead of supplying food for dogs, which is the case on most farms.

A TABLE OF THE COMPARATIVE VALUE OF DIFFERENT KINDS OF FODDER FOR CATTLE has been published by M. Antoine, in France, and is the result of experiments made by the principal agriculturists of the Continent, Thaer, Gemerhausen, Petrö, Rieder, Weber, Krantz, André, Block, De Dombasle, Boussingault, Meyer, Plotow, Pohl, Smée, Crud, Schwertz, Pabst. It is unnecessary to give the figures which each of these experimentalists have set down, but the mean of their experiments being taken, there is more chance of the result being near the truth. Allowance must be made for the different qualities of the same food on different soils and different seasons. In very dry summers the same weight of any green food will be much more nourishing than in a dripping season. So likewise any fodder raised on a rich dry soil will be more nourishing than on a poor wet one. The standard of comparison is the best upland meadow-hay, cut as the flower expands, and properly made and stacked, without much heating; in short, hay of the best quality. With respect to hay, such is the difference in value, that if 100 lbs. of the best is used, it will require 120 lbs. of a second quality to keep the same stock as well, 140 lbs. of the third, and so on, till very coarse and hard hay, not well made, will only be of half the value, and not so fit for cows or store cattle, even when given in double the quantity. While good hay alone will fatten cattle, inferior hay will not do so without other food.

100	lbs. of	Good hay is equal in nourishment to
102	" "	Lattermath hay
90	" "	hay-made Clover, when the blossom is completely developed.
88	" "	Ditto, before the blossom expands.
98	" "	Clover, 2d crop, is equal in nourishment to
98	" "	Lucerne hay
89	" "	Sainfoin hay
91	" "	Tare hay
90	" "	Spergula arvensis, dried
146	" "	Clover hay, after the seed
410	" "	Green clover
457	" "	Vetches or tares, green
275	" "	Green Indian corn
425	" "	Green spergula
325	" "	Stems and leaves Jerusalem artichoke
541	" "	Cow-cabbage leaves
600	" "	Beet-root leaves
300	" "	Potatoe halm
374	" "	Shelter wheat-straw
442	" "	Rye straw
195	" "	Oat straw
153	" "	Peas halm
159	" "	Vetch halm
140	" "	Bean halm
195	" "	Buckwheat straw
170	" "	Dried stalks of Jerusalem artichokes
400	" "	Dried stalks of Indian corn
250	" "	Millet straw
201	" "	Raw potatoes
175	" "	Boiled do.
220	" "	White Silesian beet
339	" "	Mangold-wurzel
504	" "	Turnips
276	" "	Carrots
287	" "	Cohlkalis
308	" "	Swedish turnips
350	" "	do. with the leaves on
54	" "	Rye
45	" "	Wheat
54	" "	Barley
59	" "	Oats
50	" "	Vetches
45	" "	Peas
45	" "	Beans
64	" "	Buckwheat
57	" "	Indian corn
32	" "	French beans, dried
47	" "	Chestnuts
68	" "	Acorns
50	" "	Horse-chestnuts
62	" "	Sun-flower seed
69	" "	Linseed cake
105	" "	Wheat bran
109	" "	Rye bran

167 lbs.	of Wheat, peas, and oat chaff
179 "	" Rye and barley chaff
73 "	" Dried lime-tree leaves
83 "	" " oak leaves
67 "	" " Canada poplar leaves

Lattermath hay is good for cows, not for horses. The second cut is generally considered as inferior in nourishment to the first. New hay is not wholesome. At Paris, when a load of 1000 kilos is bargained for, the seller must deliver—if between haymaking and October 1, 1300 kilos—from October 1 to April 1, 1100 kilos—and after April, only 1000. This is fair, and allows for loss of weight in drying. In London, a load of new hay is 20 cwt.; of old hay, only 18 cwt.

The dried halm of the Trifolium incarnatum, after the seed is ripe, is little better than straw. Clover, lucerne, and sainfoin are generally supposed to lose three-fourths of their weight in drying; but in general they lose more, especially in moist climates, where the sap is more diluted. When touched by the frost, they become very unwholesome, and should never be given to cattle except quite dry.

Straw is, on the whole, but poor food, and unless cattle have something better with it, they will not keep in any condition; when given with turnips or other roots, straw corrects their watery nature, and is very useful; cut into chaff it is very good for sheep when fed on turnips and oil-cake, and when newly thrashed is as good nearly as hay. By a judicious mixture of different kinds of food, a more economical mode of feeding may be substituted for a more expensive one, and the same result obtained. The value of straw depends much on the soil: a very clean crop will not give so nourishing straw as one containing many succulent weeds. Peas and vetch halm are superior to straw, especially when cut into chaff: it is by some thought equal to hay. The same may be said of bean halm not left too long in the field, and cut before it is completely dry. Buckwheat halm is of little value: it is thought unwholesome if given to sheep.

16 lbs. of raw, or, 14 lbs. of boiled potatoes will allow a diminution of 8 lbs. of hay.

Turnips will feed store pigs, but they will not fatten on them. Carrots and parsnips are excellent for horses, and, when boiled, will fatten hogs. Ruta-baga is liked by horses: it makes their coats fine, but must not be given in too great quantity, or it will gripe them.

Feeding.—A certain quantity of food is required to keep an animal alive and in health: this is called his necessary ration of food: if he has more, he will gain flesh, or give milk or wool.

An ox requires 2 per cent. of his live weight in hay per day; if he works, he requires 2½ per cent.: a milch cow, 3 per cent.: a fatting ox, 5 per cent. at first; 4½ per cent. when half fat; and only 4 per cent. when fat; or 4½ on the average. Sheep grown up take 3 1-3 per cent. of their weight in hay per day, to keep in store condition.

Growing animals require more food, and should never be stinted.—*Jour. Roy. Ag. Soc.*

HYDRAULIC PRESS.

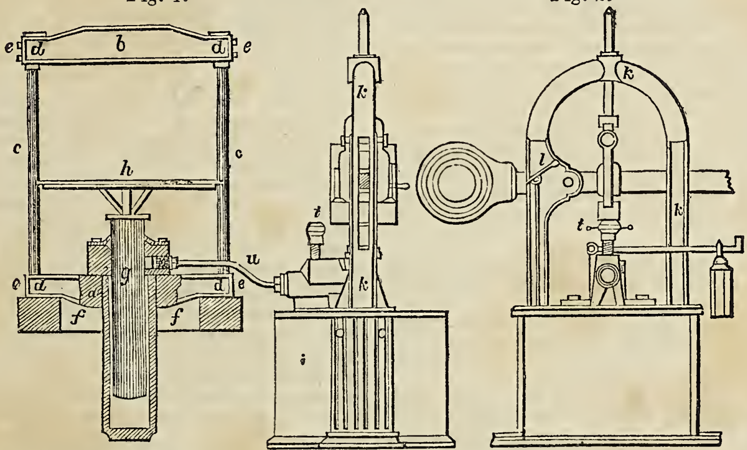


Fig. 1. Fig. 2.

The framing consists of two stout cast iron plates, *a*, *b*, which are strengthened by projecting ribs, not seen in the section, fig. 1. The top or crown plate *b*, and the base plate *a*, *a*, are bound most firmly together by 4 cylinders of the best wrought iron, *c*, *c*, which pass up through holes near the ends of said plates, and are fast wedged in them. The flat pieces *e*, *e*, are screwed to the ends of the crown and base plates, so as to bind the columns laterally. *f*, is the hollow cylinder of the press, which, as well as the ram g, is made of cast iron. The upper part of the cavity of the cylinder is cast narrow, but is truly and smoothly rounded at the boring-mill, so as to fit pretty closely round a well-turned ram or piston; the under part of it is left somewhat wider in the casting. A stout cup of leather, perforated in the middle, is put upon the ram, and serves as a valve to render the neck of the cylinder perfectly water-tight, by filling up the space between it and the ram; and since the mouth of the cup is turned downwards, the greater the pressure of water upwards, the more forcibly are the edges of the leather valve pressed against the inside of the cylinder, and the tighter does the joint become. This was Bramah's beautiful invention.

Upon the top of the ram, the press-plate or table, strengthened with projecting ridges, rests, which is commonly called the follower, because it follows the ram closely in its descent. This plate has a half-round hole at each of its four corners, corresponding to the shape of the four iron columns along which it glides in its up-and-down motions of compression and relaxation.

k, *k*, figs. 1 and 2, is the framing of a force pump with a narrow barrel; *i* is well for containing water to supply the pump. To spare room in the engraving, the pump is set close to the press, but it may be removed to any convenient distance by lengthening the water-pipe *u*, which connects the discharge of the force pump with the inside of the cylinder of the press. Fig. 3 is a section of the pump and its valves. The pump *m*, is of bronze; the suction-pipe *n*, has a conical valve with a long tail; the solid piston or plunger *p*, is smaller than the barrel in which it plays, and passes at its top through a stuffing-box *q*; *r* is the pressure-valve, *s* is the safety-valve, which, in fig. 2, is seen to be loaded with a weighted lever; *t* is the discharge-valve, for letting the water escape, from the cylinder beneath the ram, back into the well. See the winding passage in fig. 4. *u* is the tube which conveys the water from the pump into the press-cylinder. In fig. 2 two centres of motion for the pump-lever are shown. By shifting the bolt into the centre nearest the pump-rod, the mechanical advantage of the workman may be doubled. Two pumps are generally mounted in one frame for one hydraulic press; the larger to give a rapid motion to the ram at the beginning, when the resistance is small; the smaller to give a slower but more powerful impulsion when the resistance is much increased. A pressure of 500 tons may be obtained from a well-made hydraulic press with a ten inch ram, and a two and a one inch set of pumps.

Fig. 3.

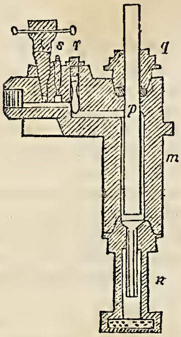
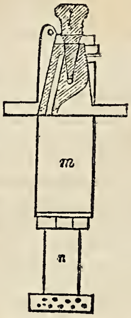


Fig. 4.



We have been politely favored with the above cuts, from Ure's Dictionary, by Messrs. D. Appleton & Co., the Publishers of that valuable work.

REVIEW OF BOOKS.

(*Concluded from our last number.*)

Barnabe Googe, Esq.—Of *Sheep* there is not much to note. He cautions against the use of those whose tongue is black or "peckled," as producing black or pied lambs, which he takes from Virgil. The shepherd's care is well delineated. He is to drive the flock early to the field while the dew is abundant on the grass, and when the sultry heat of noon approaches, they are to be driven under some cold and watery rocks, and again at evening, plentifully refreshed with dew moistened herbage. For the fineness of their fleece, the most esteemed in our author's day, were those of England, Germany about the Rhine, and France. Spain, that probably then held the fine wooled merinos, is not mentioned, showing the limited intercourse that even then subsisted among enlightened nations. When the skin is cut in shearing, tar is recommended to be applied. Plenty of salt, change of pasture, and short, sweet feed was the best rule for them then, and it is the best now. When scabby, Constantine out of Dydimus, enjoins washing with urine, and then anointing with brimstone and oil; tar is a good remedy. For general disease of the flock, change of situation, as remote as possible, is best. Juniper berries with salt, and something added to relish, is urged to be given three or four times a year. "If lowzie or full of Tickles, they doo use to beat the roots of maple and seethe in water, then powre the licour on the skin of the back, so as to run all ouer the bodie. Others use the roote of the mandrake, not suffering the sheepe to taste thereof." Extracting the worm from the sheep's claws is given from Maister Fitzherbert. The dried flowers of wormwood, with salt, was administered as a sovereign remedy for all diseases.

A chapter on *Goats*, as dairy stock, is in some measure superseded in modern times, by short horns, and we must omit the curious details respecting these *cattell*. The merits of the different varieties of cheese, in our author's day, was after in the following order: "The Parmasines, from the river Po, Holland, Normandy, English. Of this last, the order was Cheshire, Shropshire, Banbury, Suffolk, Essex; and the *very worst*, the Kentish." It is recommended keeping them in grain, as many now do. If to the rennet, the juice of birch be added, all skippers are avoided.

Swine.—From the first invasion of the Saxons upon the sea-girt isle, swines flesh, through all the successive days of Arthur, Alfred, Cedric and Gurth, to the present time, has been a prominent object of attention, and ten pages of truth and error, good sense and no sense, attests our author's devotion to the theme. Virgil's Italian sow, with thirty white pigs around her dugs, requires no greater stretch of credulity, than many of the statements here. The shape given is "long, large sided and bellied, wide buttocked, short legged and footed, big necked and well brawned, short groyned,* and turning upward, his tayle *wrinkled*, and very prolific." He affords *fifty dayntie dishes.* Varro is still ahead of our most ambitious western breeders; "a present of two ribs being sent to a Roman Senator, *one foot and three inches* between the skin and bone."

Dogs and doggeries, with a list of classical names, for them and the breeding of cats, close the third book.

A long chapter on poultry and eggs, and making of capons, contain many good suggestions, and as many crudities. Geese in his day, were very liable to have their necks broken, "with pulling at the tough and stubborn weeds, by reason of the sudden starting back of the weed." The Patie de gras foi of the French, seems to be an old dish, "as the Jews used to fat their geese by wrapping them up in a linen apron, and hanging them up in a dark place, and stopping their ears with peason, then by crowding their stomach with ground malt or barley steeped in water, with gravel and water, they got so fat their livers weighed 5 lbs. Whilst I was at the Council of Worms, there was a liver of a goose brought me by a Jew that weighed 4 lbs.

When Ambassador to England, I was told by men of good credit, there was in Scotland, near the sea, certayne trees that yearly brought forth fruit, which falling into the sea, became a kind of wild duck, or rather barnacles. Aristotle witnesseth the like, affirming there is a tree in Scythia, with leaves larger than the maple, whereof cometh a kind of four footed birds." For much curious poultry lore, reference must be had to the book itself. Turkeys are herein alleged to have been introduced into England a little preceding 1530. The receipt for pigeon fatting, is breaking their legs, that they may not move far, which is akin to fatting geese, after *nailing* their feet, still practiced in England, and whipping them to death, sometimes done in Europe now, to increase the tenderness of their flesh.

Fish ponds, as they were a great item in the provision of the ancients, and are still among the wealthy and luxuriant moderns, so were they during the middle ages, and all the varieties and modes of treatment are here described.

---

* Groin, snout—from the French.

Bees, that magic sound, that has awakened the cupidity of the parsimonious, the appetite of the gluttonous, the song of the poet, the sentiment of the moralist, and the grave deductions of the lawgiver, statesman, and political economist, from time immemorial, seems to excite all our author's zeal, and for forty pages he discourses on their then mysterious and undiscovered habits, their laws, good government, industry and exemplary habits. All the poetry and prose that can be mustered, is invoked to do them justice. The queen was then universally designated as the king. Their fidelity to him is shadowed forth in the quaint old nasal psalmody translation of that day, from Virgil.

"On him they cast their eyes and gard him day and night,
And oft they beare him on their backes, in his defence they fight,
But if he chance to dye, then all is dasht and donne,
Their coams asunder downe they teare, and all to ruin runne."

Their preparation for repose after the weary toils of the day, is thus cosily depicted:

"They trimme theyr wings, and set theyr legs in frame,
Till every one himself, hath throughly drest,
Then synging at theyr doores awhyle they game,
Till one giues warnyng for to goe to bedde,
Then downe they lay to rest theyr sleepie head."

To prevent capsizing in a gale, the ancient bees were accustomed to carry small stones in their feet "as Botes in balast be." The *drone*, the *gentleman* of the commonwealth, was appropriately enough, styled the *theefe*. "He feedes like a lubber of the sweate of his fellows, yet serveth he for breeding and bringing up of the young bees, and when done, he is thrust out of the hive.

For such ambitious bee princes, as are forever leading their otherwise staid, and well-to-do-in-the-world-people abroad on fools errands, wasting their own time and interfering with other people's, he recommends depriving of their wings, "that so this too busieheaded leader being depriued of his sailes, will keepe at home in spite of his teeth." The receipts for breeding bees will be convenient for such as have a deficiency; and which, strange as it may seem, we recollect to have heard detailed in our boyish days, in some of the remote villages of New England, with all the gravity of established and incontrovertible axioms, by the descendants of those ancient pilgrims, who possibly might have been some of the descendants of Barnabe himself:

"Of steere that strangled is, are children strangely bred,
Of horse engendered is the Waspe, and Bees of Bullock ded.

For a young oxe or steere, being strangled, corrupted and cast into some such place, where the putrified vapor cannot breath out, and store of herbs, and flowers agreeing with the nature of the bees, thrust into the body, as thyme, cassia, and such like, wherewith the vapor may be tempered, you shall quickly hereof have bees, as you may of the horse, waspes and hornets—as Virgil sayeth:

The chaynes unchaste of Venus they detest;
To fyle themselves with fylthe lecherie
They judge unmete, nor wyl be so increast,
But from the plants and pleasant flowers sweete,
They fetche their tender broode.

Another fashion is, to frame a little house four square, with a window on every side tenne cubits square and high. A young fatte steere being brought hither, and his nose and ears, and all other open vents being stopped with linnen dipt in pitch, must be beaten with numbers of clubs to death, so as both the bones and flesh may be broken without any blood: for of the blood cometh the bee. Afterward the house being deep strawed with thyme, and the Bullocke being laide uppon his backe, doores and windowes must be close shut up and so plaistered that no ayre can enter. Three weeks after the windowes must be opened on eury side, saue where the wind bloweth strongest, and the ayre let in; when it hath been wel cooled and refreshed the windowes must be shut up againe, and being opened the 11th day afterward you shall find a housefull of bees, and nothing left of the oxe, save the hornes, the heare and the bones; the kings being engendered of the braine and the other bees of the body.

PVLLARIVS.—I like not so costly comming by bees.

MELISSEUS.—Of the same opinion is Columella: I tell you but the order of the old skilful fellowes, you may choose whether you will try it." And here we must take leave of the illustrious Conradus Heresbacheus, Counsellor of mighty Princes, and ambassador to illustrious courts; and his scarcely less distinguished elucidator and commentator, Barnabe Googe, Esquire.

SYSTEM OF FARMING *practised by the late Lord Leicester.*—The last No. of the Royal Agrl. Journal of England received, is unusually rich in original papers of great interest to the farmer. Some extracts will be noticed in our present No., and the want of room only prevents our increasing them. The items which follow are some of the subjects treated in it.

The first article is an excellent one from Earl Spencer, on the improvement of the estate of the late Lord Leicester. This was accomplished in a few years, by the adoption of an improved mode of cropping, and the application of *marl*, dug beneath the light sandy surface, that everywhere abounded on the estate. The simultaneous introduction of the best variety of cattle, sheep, and swine, enabled him to carry out and perfect the improvements of the soil, and his practice became a model for the imitation, not only of his own country, but in other parts of the world. Close observation, and a careful investigation of the merits of rival breeds, was his only criterion, and when *his own experiment*, long and accurately tried, convinced him of an error in his operations, he was ready at once to reject them, and substitute such as were grounded on the fullest experience.

In stock he commenced with the Bakewell Long Horns, but gradually allowed the Devons to usurp their place, till 1812, since which, they have been the only cattle he has bred, they being admirably adapted to the light soil of Holkham. In sheep, he first commenced with the Norfolk, but subsequently adopted the South Downs entirely. Into this breed, of late years, he has infused a dash of the Hampshire Down, by which, he conceived he got more constitution, a greater value in wool, and a larger proportion of lean meat in the carcass. He was also in the habit recently, of using a long wooled ram on his pure South Down ewes, by which he got an excellent and profitable sheep for the market. His pigs were made up of various crosses, after a fair trial of their respective merits. The improvement ran through all his operations, manures, tillage and crops, and resulted in reclaiming one of the poorest estates in England, and converting it into one of the best, and with this important addition, that it was constantly and abundantly repaying all the improvements by its annual return of crops.

TRENCH PLOW.—There is an excellent model of the Great, or Jersey, Trench plow, by that veteran agriculturist, Col. Le Couteur, and the detail of its use in the last number of the Journal. After a few inches of the top soil has been thrown off by an ordinary plow, it is drawn along by a powerful team of four to eight horses, in the same furrow, turning up the land from 10 to 18 inches more, all of which is made into a good soil. By this means immense crops of roots, grain and grass are raised. This single plowing is a substitute for the numerous shallow plowings practiced in other parts of England, and the deep and expensive spading, practised in proper garden tillage every where. But as few of our countrymen are as yet prepared to encounter this thorough system of husbandry, we forbear to enlarge upon it. We will add, however, that where this system is practiced, land has got to be worth from $500 to $750 per acre, for cultivation.

ON COTTAGE ECONOMY AND COOKERY.—It seems, from a long report to be found in this journal, the premium for which was awarded to a lady, that the leading, most intelligent, extensive, and useful Agricultural Society in the world, does not think it beneath them to publish, with all the minutest items, 18 pages of receipts and managements in cooking cheap, substantial, and wholesome dishes for the laboring classes. Though we consider this a peculiarly appropriate topic for that longitude, we should deem it also fully worthy of this, did our space allow us to give them, so modified as to be entirely adapted to our situation. It will have been noticed by our readers, that we have occasionally appropriated a corner to these matters, from our own consideration of their intrinsic merits.

LEAGUE OF INDUSTRY, *devoted to Home Manufactures, Agriculture and Commerce.*—The above is the title of a neat, semi-monthly sheet, of 8 pages, published at Richmond, Va., by Moses Goold. We hail the establishment of the above paper at the capitol of the Old Dominion, as one of the best signs of the times. The paper sent us is well filled with original matter, sound, sensible and to the point; all bearing on the subject of fostering *domestic* industry, instead of sending our money to foreign countries, for such articles as we can abundantly supply at home. The disturbing subject of *politics* has no place there. *The true interests of the entire citizens of the Union is the theme*, and to this we hope it will rigidly adhere. If this work is sustained, it will accelerate the highly beneficial change of opinion on these important topics in the south, which has been going on for some years past.

The interesting BIOGRAPHY OF BAKEWELL, was in type for our last No. but not having room then, it appears in this. It is probable that *Bakewell possessed more genius as a breeder than any other of the human race;* certainly far, very far, was his success in advance of any other individual, whose name history has handed down to us. The sketch we give, will be read with interest by every intelligent breeder.

THOROUGH UNDER DRAINING.—We had marked for publication, from the Lon. Far. Mag., the best article we have yet seen on under draining, by Mr. Smith, of Deanston, but as we have not yet had space for its publication, and know not when we shall, and the system thus far, has been so little practised in this country, we conclude to deny ourselves the pleasure of laying it before our readers for the present.

EDITOR'S TABLE.

(Omitted in our last number.)

THE TREATY AND THE TARIFF.—We cannot permit our paper to go to press, without congratulating our readers on the successful negotiation of a treaty with Great Britain, and the enactmect of an efficient protective tariff. The first, gives us a present, and the hope of a permanent peace, with the only nation in the world that can do us material injury; the last, will afford us, so long as we have wisdom to adhere to it, a reasonable condition of prosperity, throughout every portion of our country. The first, secures us from foreign violence and aggression; the last, from foreign management and fraud. The first, protects the peaceful fireside of every citizen of the union; the last, yields to industry and frugality, an abundance of all the comforts of life. The first, will prevent a vast national injury; the last, in the aggregate, an equal or greater amount of individual loss.

But after the consummation of the treaty, there is nothing we so much admire, as the straight forward, honest, manly sense, exhibited by the two distinguished agents in the negotiation. They evidently entered upon their arduous duty with the good faith, direct purpose, fair and open dealing, that characterises honest men in their private transactions, and *has not* characterised most of the national bargains, that have been concluded within the last few centuries. A different system of policy has been taught by the diplomatists of the middle and later ages; a system of fraud and treachery, of chicanery and deception, where each party cautiously lay in ambush, till some carelessness on the part of his adversary, or some successful manœuvre of his own, afforded an advantage which the wily negotiator secured at a single bound. The whole host of feline statesmen, from Machiavel, Talleyrand, and Metternich, the royal tigers of the race, down to the pettiest grimalkins that prowl around a bird's nest, or rat warren, have, by these illustrious statesmen, been rebuked and instructed, for all time to come. They had a great and noble purpose to achieve, which they at once accomplished, by mutual, though trifling concessions; while they secured important and lasting advantages to each of the great nations they represented. The honest intentions of Great Britain were amply guaranteed, by sending to us a representative, strong, and justly too, in the confidence of his own government, but whose character, developed through a long and successful life, rendered him every way acceptable to our own. In announcing Lord Ashburton's appointment as the plenipotentiary to this country, we had the assurance, that while England would lose nothing she had a fair right to claim, there would be no attempt to secure petty advantages, to which she had no title; and the appointment of America's great statesman by us, was an evidence of an equal disposition on our part, to conclude a treaty on the broadest principles of a just and enlightened policy. *Let it be perpetual.*

The tariff recently passed, though not free from objections in its details, yet as a whole, is worthy the approbation of every American, who desires to see his fellow citizens protected against the frauds of aliens, and the pauper labor of other lands. We have had a pretty thorough trial of the principles, and practical working of *free trade* for the last eight years, and the result may be stated in a few words.

From 1833 to 1840 inclusive, a period of eight years, we have imported in round numbers, to the amount of $1,102,000,000, at an average duty of about 20 per cent; and during the same time we have exported

$925,000,000, paying in the countries to which exported, an average duty of over 90 per cent; making a balance of $177,000,000. A part of this balance, however, does not exist against us, having accrued in the shape of charges and profits in the carrying trade of our vessels. A sufficient amount however remains to show us the beautiful operation of the free trade system, when our Legislators are unwise enough to take off the commercial restraints that should ever be interposed to individual cupidity when dealing with nations that so rigidly, and we may add, wisely, protect their own interest.

By this experiment, we have reduced ourselves from the most prosperous condition any nation ever enjoyed on the face of the earth, to a state of general ruin and bankruptcy—bankruptcy of the federal government, state governments, banks, corporations, and individuals. Nearly $200,000,000 are still due by us abroad, while figures can hardly be arranged to give an intelligible estimate of the aggregate indebtedness at home. We came out of the eight years war of the revolution with the most powerful nation on the globe with a debt of $50,000,000; we come out of an eight years experiment of comparative free trade with a debt more than *three times* as great. Surely the bitterest enmity of open foes is tender mercy, in comparison with the cruelty of insidious friends.

We exhibit at the present moment something such a spectacle as one of the ancient mastadons, whose bones fill up our western salt licks, as the skeletons of ancient and once powerful, but simple minded nations, now dimly fill up the pages of history; one that was lucky enough to escape a voluntary immersion in a Kentucky quagmire, we mean. After floundering and struggling, and perhaps dislocating a few limbs, and almost exhausting his more than leviathan strength, he has succeeded in reaching terra-firma, and there he lies, all drabbled with mud, and reeking with slime. All the beasts of the forest could not have compelled him to his degraded condition, yet the veriest jackal of the woods can now insult him with impunity. Or, we may take Samson for our exemplar; wearied out by the solicitations of our free trade Delilahs, we have at last yielded our better judgment to their vexatious teazing, and like him, we have paid the just forfeit of our folly by grinding in the prison house of the Philistines. It is lucky for us that unlike the captive Hebrew, we have not had our eyes bored out in our humiliation. We have only been hood-winked, and as our increasing locks are already renewing our vigor, we may confidently expect that an acuter vision will direct our returning strength to an effectual self protection in future.

LARD LAMPS.—A friend has politely sent us one of the improved lard lamps, with the following statement. He bought 1 1-2 lbs. lard, at 8 cents per lb. and one pint of sperm oil, for 12 1-2 cents, which he placed in separate lamps, and commenced burning; each being so regulated as to afford, as near as the eye could determine, precisely the same quantity of light. The result was, *one half of the lard exhausted all the oil:* or the same light is furnished from lard at one half the cost of oil at the above prices. But in the interior lard is frequently bought for half the above price, and oil for 50 per cent. more; the difference then is as 3 to 18 in favor of lard, or a saving of *five-sixths* the cost of the oil.

The lard, free from salt, is put in cold, and a small quantity applied around the tubes, which settles into the small cup on the top and supplies fuel for the light till it is sufficiently melted within the lamp to afford a supply. For sale by E. FILLEY, 125 Maiden-Lane.

☞ We shall be obliged by the Editors of the Southern Planter, at Richmond, sending us the report of the Farm Committee of Henrico of 1841, which they esteem as a "model of that kind of writing." We have no recollection of ever seeing it, and would much like a perusal. We still incline, however, to our own suggestion of "mounting the rostrum," as the owners of animals could then be heard in explanation and defence, which we consider very important; and such a viva voce discussion, carried on with courtesy, and within a limited time, could not fail of being very exciting and instructive. We should not object to a condensed and clearly defined after-written report, to be published among the transactions of the society, so that our friends will see that we quite agree on this subject.

☞ SUBSCRIBERS who have not yet paid for the current volume of this paper, are reminded that this No. completes *two-thirds* of the year. Our terms are, *payment strictly in advance*, and any deviation from this rule, has been made for a temporary accommodation only. *Collecting* one dollar per ann. from subscribers, when they are scattered from Maine to Louisiana, is of course out of the question. Debts due us, therefore, for the work, are strictly debts of honor. We trust to this character of our claims alone, for their immediate transmission to this office. Such as do not receive their numbers hereafter, must assign this as the cause of withholding them.

We expect those gentlemen who have voluntarily, or by request, acted as agents, will in all cases indemnify themselves for their trouble, by reserving the commission allowed.

Works pertaining to Agriculture for sale by Saxton & Miles, 205 Broadway.

Johnson's Elements of Agricultural Chemistry and Geology, 50 cents; Do. do. 1 vol. 12mo. $1; Gray's Botanical Text Book, $1 50; Lindley's Horticulture, $1 25; Gray's Agricultural Chemistry, $1 00; Downing's Landscape Gardening, $3 50; do. Cottage Residences, $2 50; Leibig's Organic Chemistry, &c. &c.

Orders from any part of the United States punctually attended to, at the **cheap cash book store, 205 Broadway.**

Wheat Sheaf FARM on Staten Island, for sale.

A recent domestic bereavement has induced the Undersigned to offer his residence, on Staten Island, for sale. It is situated midway of the outer bay, on the sea shore, eight miles from the quarantine Ferry, three from that of Rossville, and equi-distant from two others, Seguine's Landing and Port Richmond.

The condition of the Farm—the extent, value, and practical usefulness of the improvements and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upwards, each including an appropriate allotment of woodland—each division offering a moderately elevated building location. The condition of the soil can at this time be best appreciated, as its harvest is heavy and now gathering. Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product. W. A. SEELY, 218 Fulton-st. N. York.

ISABELLA GRAPE VINES,

Of proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their locality is not too far north.) All communications, post paid, addressed to R. T. UNDERHILL, M. D. 400 Broadway, N. Y., will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grape vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, all the Western, Middle and Southern States. October, 1842

REVIEW OF THE MARKET.

Prices Current in New-York, October 29, 1842.

ASHES, Pots, per 100 lb.	$5 50	to 5 62
Pearls, do.	5 87½	—
BEESWAX, Yellow, per lb.	29	29½
COTTON, Louisiana, do.	6	10½
Upland, do.	5¾	9
Florida, do.	6	9
Alabama, do.	6	10
FEATHERS, American, live, per lb.	25	34
FLAX, American, per lb.	8	8½
FLOUR, Northern and Western, via Erie Canal, per bbl.	4 19	4 25
do. via N. Orleans,	4 12½	4 19
Southern, per bbl.	4 50	4 87½
RYE, per bbl.	3 12½	3 37½
MEAL, Corn, per bbl.	2 75	3 00
do. per hhd.	13 50	14 00
WHEAT, Western, per bushel,	83	88
Southern, do.	70	80
RYE, Northern, per bushel,	60	61
CORN, do. do.	54	57
Southern, do.	49	53
BARLEY, per bushel,	46	48
OATS, Northern, per bushel,	24	27
Southern, do.	18	20
PEAS, Field, do.	—	---
BEANS, White, per bushel,	---	---
CLOVER SEED, per lb.	7	7¼
TIMOTHY SEED, per tierce of 7 bu.	11 50	12 00
FLAX SEED, rough, do. do.	10 00	10 50
clean, do. do.	---	--00
RICE, per 100 lb.	2 44	3 25
HEMP, Russia, per ton,	210 00	215 00
American, do.	2 80	—
HOPS, first sort, per lb.	11	14
LEAD, Pig, per lb.	3¼	3⅜
Sheet and Bar, per lb.	4½	5
OIL, Linseed, American, per gal.	90	96
PLASTER OF PARIS, first quality, per ton,	2 25	2 75
unground do.	1 87½	2 00
BEEF Mess, per bbl.	7 25	7 50
Prime, do.	2 75	3 50
Cargo, do.	2 50	2 75
PORK, Mess, do.	7 50	9 50
Prime, do.	5 00	6 50
LARD, per lb.	7	8
BUTTER, best Table, per lb.	16	18
Western, good, per lb.	12	14
Shipping, do.	6	7
CHEESE, in boxes and casks, per lb.	5½	6½
HAMS, Smoked, per lb.	6½	8
Pickled, do.	—	—
Shoulders, smoked.	—	---
BEEF, Smoked, do.	6	7½
SALT, Liverpool, ground, sack	---	1 47
do. fine, do.	1 62½	1 72½
SUGAR, New Orleans, per lb.	5	6
TOBACCO, Virginia, do.	3	6
Kentucky, do.	3	7
TALLOW, American, do.	8	8¼
WOOL, American Saxony fleece, per lb.	32	35
Full blood Merino do. do.	28	30
Half to three-fourths do. do.	24	26
Native to half do. do.	18	20
SHEEP PELTS, each,	---	—
HAY, per 100lb.	56	62½
POTATOES, new, per bushel,	25	---
EGGS, per 100,	1 00	—

Remarks.—The market remains at its former rates, nearly; a slight reduction in the prices of flour and grain, being the principal ones we notice. American water rotted hemp will at present command from our navy, by the judicious protective policy they have adopted towards this article, $280 per ton, which is a sufficiently liberal encouragement, it is presumed, to insure a full supply hereafter.

An agent from a commercial house in Liverpool has travelled extensively through various sections of our country this season, and by circulars, has distributed extensively the modes of putting up provisions for the English market. The experiment is worth the trial whether we can export these articles to a profit, and we trust it will be thoroughly tested. Lard should be put up in large tight barrels, and if it arrives in *prime order*, it will there be opened and re-packed in bladders, after the Irish mode, or in small neat kegs, and offered as English lard, and sold at a fair price. Directions for packing beef and pork, can be found in most of the Western papers, copied from the above circular. *Good* butter pays a duty of 5 cents per lb.; its exportation, therefore at any fair profit is out of the question. By reducing the quality to shipping butter, in which condition a large portion of it is now brought to this market from the west, it pays the shipper here handsomely at our quoted rates, 6 to 7 cts. being sold abroad as *grease*.

New-York Cattle Market, Oct. 24, 1242.—At market 1350 head of fresh Cattle, (400 from Pennsylvania,) 3000 Sheep and Lambs, and 20 Cows and Calves.

Prices—Beef Cattle have been dull of sale, and we put our figures at $5,50 for prime cattle, fair to ordinary sold as low as $3,50. At which prices several lots were taken for barrelling. Unsold 300. Cows and Calves—All at market taken at $20 *a* $35. Sheep and Lambs—2800 taken at from $1,50 to $2 for Sheep, and $1 to $2,25 for Lambs.

ORCHARD GRASS SEED,

Of the first quality, this year's growth. Orders received at the Office of the Am Agriculturist, where a sample may be seen.

SAXTON & MILES,

PUBLISHERS AND BOOKSELLERS,

205 BROADWAY—NEW YORK.

Wholesale and Retail Dealers in Theological, Classical, Agricultural, Health, Miscellaneous and School Books.

S. & M. intend keeping a full supply of all works relating to Agriculture and its improvement, and to the sciences connected therewith; and to make their store a Depot, where the Farmer especially can find any thing he may wish, whether pertaining to his business or otherwise; and also where he can send his orders for books, with the confidence that they will be promptly and faithfully attendedto.

THE HEALTH ALMANAC for the YEAR 1843.—*Devoted to the Law which regulates the animal, originally designed for the Spirit of Man—By a* Vegetable Eater.

CONTENTS.—Equinoxes and Solstices..Eclipses in the Year 1843—Calendar, with Maxims on Health, Law, Policy and Mind—Agricultural Statistics of the U. S. by Hon. H. L. Elsworth—Mastication—Life—Milk—Nothing made in vain—The Stomach and Internal Canal—Worms in Living Creatures—On Swine's Flesh as food—Original Food of Man—Relation of Man and Wife—Relation of Parent and Child—Preparation of Bread Stuff—Bread Making—Head Ache—Life and Death—Formation of the Teeth—Bankrupts—Eating—Query answered—Disease and Pani—Bathing—Sleep—Dreaming—General Differences of the Sexes of the Animal and Vegetable Kingdom—Rates of Postage, &c.

Published by SAXTON & MILES, 205 Broadway—price 6 cents single copy; 37 1-2 cents per doz.; $2 50 per 100; 20 dols. per 1000

R. H. HENDRICKSON,

MIDDLETOWN, BUTLER COUNTY, OHIO,

Is now prepared to fill orders for thorough-bred Berkshire Pigs, from the late imported boars Windsor Castle and Earl Craven, and twenty choice sows purchased of A. B. Allen, a part of his recent importation. Pigs in pairs from this superior stock will be furnished substantially caged and delivered on the canal at Middletown, or on board steamboat at Cincinnati, from $30 to $50, according to age and quality. Orders accompanied with cash, will always secure the preference.

ALSO—Pigs bred from the superb boar Kenilworth, of a stock of the largest and finest kinds of white hogs in England, also imported by Mr. Allen last October, crossed on the splendid large white Miami hogs of this country. The Miamis have been long noted for their large sizes. Animals of this breed have occasionally come up to the enormous weights of 1200 and 1400 lbs., and it is believed that the cross of Kenilworth on them, will easily attain the weights of 700 to 1000 lbs. at 18 months and two years old, if well fatted. Pigs of this cross $25 per pair, caged and delivered as above. Refer to the editors of this paper.

Contents of this Number.—Editorial.

Premiums of the Agricultural Fair of the Am. Institute for 1842, 228
Notice of the Agricultural Fair, 22
Notice of the Fair of the Am. Institute at Niblo's, 22
Tussack Grass, 229
Patent Stucco—Erie Co. Fair—Palmer Worm, 230
Raising Indigo—Tour in England No. 8. 231
The Valley of the Miami, 234
Anthracite Ashes and City Manures—Testing Plows—Dynamometors—Raising Wheat, 236
Correspondence.—Sheep on the Western Prairies, 237
Long and Short Manure, 238
Notices of Correspondents—Plan of a Bee Hive, 239
Cultivation of the Locust, 241
Exchange Papers—To Correspondents—Letters from Thomas Bates, Esq., &c. 243
Boys' Department.—The Pigeon, 244
Selections.—Biography of Bakewell, 246
Comparative merits of Horses and Oxen for farm work—Comparative value of different kinds of Fodder, 250
Hydraulic Press, 251
Review of Books.—Barnabe Googe, 252
System of Farming practised by Lord Leicester, 253
French Plow, Cottage Cookery—The Treaty and the Tariff, 254
To Subscribers—Lard Lamps—To the Southern Planter 255

V. L. Dill, Stereotyper, S. W. Benedict, Printer.

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.--*Washington.*

Vol. I. New-York, December, 1842. No. 9.

A. B. Allen, and R. L. Allen, Editors. Saxton & Miles, Publishers, 205 Broadway.

THE AMERICAN AGRICULTURIST
will be published Monthly, each number to contain thirty two pages royal octavo.

Terms.--One Dollar per annum, payable strictly in advance.

Six Copies will be sent for $5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the subscribers reside.

Thirteen Copies will be sent for $10, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, post paid, No. 205 Broadway, New-York.

☞ **Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

Composition and Cultivation of Clay Lands.

The earthy substance known as alumina or argil, forms a most important part of the materials of the earth. It exists nowhere in a pure or uncombined state, and when procured from alum, of which it forms the base, it is a light, white powder, very soft and spongy. It is distinguished in a peculiar manner, by forming a tenacious and ductile paste, when mixed and kneaded with water, and whenever it is found in soils to any considerable extent, it imparts to them this quality in an eminent degree.

The substances nearest approaching to pure alumina, are the argillaceous minerals, some of which are among the most beautiful of Creation's gems. A large class of these known as *perfect corundum*, possess a hardness and density, only inferior to the diamond, and are classed by the lapidary, according to their various colors. The red, constitutes the oriental ruby; the blue, the sapphire; the yellow, the topaz; the purple, the amethyst; the green, the emerald; and the yellowish green, the chrysolite. Of these, the sapphire analysed by Klaproth, was found to contain 98.5 of argil, 1 of oxide of iron, and 5 of lime. The ruby afforded 90 of argil, 7 of silex, and 1.2 of iron. Emery, a more extensively diffused mineral, and of general use in the arts, is composed of 86.5 of argil, 3 of silex, and 4 of iron. Mica, an invariable constituent of granite, has 30 to 35 per cent. of alumina; and hornblende, which combined with feldspar and quartz, constitutes sienite, has 12 to 14 per cent. Basalt, forming an extensive mass of rocks, has 16 per cent. of alumina; clinkstone and wacke have a large proportion; argillaceous slate, extensively disseminated, has 26 per cent; and whet slate, or honestone, of a splintery character; and drawing slate used as tiles; alum slate, from which alum is extracted; and bituminous shale, each contain large quantities.

In the disintegrated form in which alumina exists in combination with other earths, *porcelain clay* contains a greater amount than any other substance; Wedgewood having found it in Cornwall, Eng., to contain 60, combined with 20 of silex. Generally however, it has not over 42 to 48, with silex 52 to 58. The strongest *agricultural* or *pipe-clay*, consists, according to Johnstone, of 36 to 40 of alumina, with 52 to 56 of silex, 3 or 4 of oxide of iron, and a trace of lime. *This* *is generally called pure clay.* The constituents of which it is composed are *chemically* united in most cases; that is, so combined that they cannot be separated by washing or other mechanical means.

The *strongest clay soils*, which brings us to the practical part of our subject, consists of the last mentioned clay, with 5 to 15 per cent. of silecious sand, *mechanically* mixed, which admits of separation by boiling, when the sand settles, and the clay, which remains suspended in the water, may be poured off. A *clay loam* has a still larger proportion of sand, 15 to 30 per cent., which can be separated as above, and which renders the soil more loose and friable. *A loamy soil* has 30 to 60 per cent. of sand; a *sandy loam*, 60 to 90 per cent.; while a *sandy soil* has not over 10 per cent. of *pure clay*, which, it must be borne in mind, though called pure clay, contains only 36 to 40 per cent. of alumina.

The distinguished characteristics of clay soil in an agricultural point of view, are their great tenacity, which renders their separation by the plow and other implements, more difficult than such as have a larger proportion of sand; and when so divided, they do not crumble and separate into minute particles, except under peculiar circumstances. They have a strong affinity for water, holding it in great excess after rains; and their texture is such, as to prevent the easy escape of the surplus, so desirable, and even necessary, to the most successful cultivation and growth of vegetable life. These are objections that attach to all clay soils, in their unimproved condition. They are inherent in their nature, and inseparable from their constitution, wherever found, or however existing. These deficiencies are still further augmented when they occupy a level position, as many of them do. To rid them of their surplus water is the great object to be accomplished, and if this be effectually done, all other difficulties vanish. In Scotland and England, where they have a large proportion of this kind of land, which is more highly esteemed than any other, for wheat and other of the most valuable crops, they have, as is well known, adopted to a considerable extent, *a system of thorough under-draining*. We have received in the last No. of the Lond. Farmer's Mag., the details of this system, from Mr. Smith, of Deanston, which we shall give at length hereafter, if we can find room, as containing the latest and fullest intelligence on this most important practice; and, for the present, content ourselves with extracting from the Jour. of the Roy. Ag. Soc. the details of an effectual system of draining, so cheap as to be within the reach of every one where the materials are to be had conveniently. They are from the pen of Rev. G. V. Holcomb. He says:

"The land is drained with dried turf, procured for the purpose from the fens, similar in appearance to what used to be consumed instead of coal in the cottages; the length varies from 12 to 16 inches, according to the goodness of its quality, some being more brittle and more easily broken in carriage than others; the width and depth of the best turves is about 3 inches; the retail price is now 7*s.* per thousand: 4 horses in a wagon easily bring 3000. Supposing the drain to be a rod, *i. e.* 5½ yards, asunder, the usual distance, 2000 turves amply suffice for one acre of land; the durability of the drainage depends upon the soundness of the clay, the depth in the earth at which the turf is buried, and the goodness of turf, which varies in different parts of the fen. I have myself been a tile-maker for my own consumption, and used many thousands, but after twenty years of practical experience of tile and turf, prefer the latter; it is two-thirds cheaper than tiles, and, where sheep-folds are set, not so liable to have the drains broken in, the turf giving way to the drift, whereas the tile breaks and the earth follows. I now cut across the old tile-drains to make turf ones in opposite directions, and deeper in the ground. The tile-drains are frequently found to be destroyed—rats, rabbits, moles, or narrow wheeled carriages passing over them are all injurious. Turf is found to be sound which has been laid 16 years, but it pays well to renovate the drains every eight seasons. The *shape* of the drains corresponds with the turf. I send a slight sketch. The first operation is with a double-breasted plow, which makes a deep impression in the land: the laborer then takes a shovel to clear out the loose earth; afterwards he uses the spade; lastly he uses the land-ditch tool, with which the lower part of the drain is excavated to the depth of twelve inches more: the width of this aperture is about 3 inches at the top, and is gradually reduced by the shape of the implement to one at the bottom. The drain is perfectly cleared by a drawing tool or hoe. The turf is then pressed into the drain by the foot to its depth, which is about 3 inches, leaving an open course for the water of about 9 inches deep underneath; when expanded by moisture, with the earth filled in open, it will bear any weight of horse or cart. The party of men who undertake the job, generally carry to the field a small iron drift, with which they break or remove any stone that may interrupt the spade; if a large one they dig it out, filling the space with clay out of which the drain is formed for the turf. A little boy or girl, from six to eight years old, commonly attends each drainer, with a tin mug, often an old powder tin, attached by a bit of string to the end of a stick, and filled frequently with water out of a pail, with which the child follows the spade, and by pouring it out when necessary, loosens any stiff piece of clay or earth; when not wanted, the boy shovels out the moulds, previous to the operation of the spade, or collects the stones cast out, for which he is paid per load. The price of draining, varies from 3*s.* 6*d.* to 5*s.* per score rod, including boy's wages; a good hand will execute 14 rods, some more in the day. Sometimes 2, or even 3, spades' depth is taken out to get a proper level, or to penetrate the clay, when the price of course rises in proportion. If the shoulders of the drain give way in a gravelly or galty place, bushes or stubble are placed under the turf, which is doubled to fill a larger aperture."

According to the above plan, having the drains within one rod of each other, there will be required 160 rods of ditch or drain on an acre, and this at the above highest estimate, costs 5*s.* for every 20 rods, or 40*s.* per acre, or a little exceeding $9. If we double this amount, to cover the extra price of labor in this country, for the cost of this species of draining, we have less than $20, as the expense of putting an impracticable, clay soil, in a condition of yielding for 20 years, or more, the greatest quantity of produce, with much less preparation than is now required. This surely is a system that will justify adopting, wherever lands are so valuable as to render a moderate augmentation of their products an object. We are not advised of the increased value of thorough drained clay lands in this country; but though our hotter summers and drier atmosphere would probably render the difference effected by draining much less here than in England, yet there is no doubt, that the increase in crops and saving in labor, must be very great. Till we have details of the effect of such draining in this country, it would be presumptuous to state, at what price per acre this improvement would be justified. The value of an 18 years' lease of land, before draining, was estimated by Mr. Smith at less than 6*l.*, while the same lease, after thorough draining, is estimated by him to be worth more than 64*l.*; or over ten to one in favor of the land which had been drained. Such results, which have been experienced in Great Britain, will warrant ample trials among the intelligent agriculturists of America. We shall be most happy to receive, and give publicity to any well conducted, and accurately noted experiments made in this country, if any such exist.

We are confident that the inventive genius of our countrymen could easily devise some practical application of steam power, to ditching extensive, level lands, while the surface is firm and compact, during dry weather, so as to reduce the expense perhaps below the cost in Europe; and when this is accomplished, the principal obstacle to introducing this greatest agricultural improvement of modern times, will be removed. This system is, beyond all doubt, the only one approximating perfection in the tillage of heavy clay land.

A plan for under-draining, has been, to some extent, adopted in England, which is done entirely by horse or ox power, by attaching a pointed iron spindle of about 3½ inches diameter at the largest end, to a sharp coulter, which reaches to the required depth below the surface, say 20 to 30 inches. This requires a very strong team of 6 or 8 powerful horses, when the work is done with great facility, by simply carrying the spindle through the subsoil in a horizontal direction, attached to the lower end of the coulter. The adhesiveness of the clay effectually closing over the drain made by the spindle, is said to leave a permanent passage for the water for years; but as this system has not been extensively adopted in England, we may conclude it will hardly justify a trial here.

Our principal object at the present moment, is to give some general directions for cultivation of clay lands, as they are usually found in this country, which are the results of long continued, skilful practice, of the best farmers. The most desirable improvement would be, to alter the texture of this description of land, by the addition of a quantity of sand and gravel so as to modify the tenacious character of the clay. This plan, however, like that of under-draining, is too expensive for this country, except in the neighborhood of cities, where land is sufficiently valuable to justify the cost; and improvement in this way, must be confined to such lands, or small patches elsewhere, where sand is convenient for the purpose.

Another mode of improvement, which to

a certain extent, is within every farmer's reach, and is one of the legitimate objects of every good farmer's system, is to add large quantities of coarse, unfermented manure, and all his undecayed vegetables; which may be done on a large scale, by turning in matured crops produced upon the land. There is no danger of putting on too much manure of this kind, if buried sufficiently deep, in proportion to the quantity used. And there is as little danger of suffering any loss of the manure. It will last till exhausted by the growth of vegetation. Nor will it *burn* the land, according to the common phrase, as an excess of manure does on light and sandy soils. It is not carried away by rains, or evaporated by heat, but like coin, securely hoarded in a strong box, it is safely retained till the owner's key is applied to unlock it. The mechanical, as well as chemical character of this soil, particularly adapts it to the preservation of manures; for in addition to its strong chemical affinity for ammonia, which is the fertilizing principle in all soils, its mechanical structure enables it to hold beyond the possibility of escape, all the animal and vegetable substances buried beneath it.

After doing whatever can be effected advantageously towards altering its character as above described, the next process is to put the surface into the right shape. This should always have some descent, sufficient to enable the water to pass off freely. When the natural surface has not declivity enough to effect the object, the land must be thrown into beds of 10 to 20 feet wide, with a deep, double furrow between each, to conduct off the water, which falls from the more elevated surface; and the water accumulated in these furrows, should be led away through some natural ravine or artificial ditch.

For all grain crops to be sown in the Spring, the land should be plowed the preceding fall. The following spring, the grain may be sown directly upon the surface, and harrowed in and rolled, without allowing the plow to touch it. By this operation, we have the bed, in which the grain is to nestle, and from which it is to draw its future support, more finely divided by the elements, and the action of frost through the winter, than can be done by any instrument whatever, and no alteration of this handiwork of nature can be made but for the worse.

If corn or roots are required, the land should be *half* plowed the previous fall; that is, a space should be left unmolested, of the width of a furrow, on which the upturned furrow is thrown. By this operation, a large dry surface is exposed to the salutary effects of air and moisture, heat and frost; and it will be in the best possible condition for early tillage, and abundant crops. It will be mellow, friable, and comparatively dry, and by thorough cross-plowing, harrowing and rolling, in the spring, it will be well fitted for the reception of the seed.

Of the immense capabilities of good clay soils, we have never been more favorably impressed than during the last and present seasons. While surrounded by scorched fields and withered crops, during the excessive drought of last year, our own crops of every kind, on a tenacious clay, were sufficiently supplied with moisture, and were never heavier and better. The present summer has been one of excessive rains, yet when the land was well supplied with manure, and properly laid up, the yield has been peculiarly good. The long continued cold of the spring was unfavorable to many crops, yet after a thorough examination, during the summer, of those growing on every variety of soil, over an extent of several hundred miles, we have no where seen them better, or more abundant, on any land in no higher condition.

For *winter wheat*, we do not think them suitable, unless prepared by thorough underdraining, as the wheat is very generally winter killed, or thrown out by the frost, or drowned by excessive rains, before the sun gets sufficiently high to protect it. But with the best varieties of spring wheat, it produces largely. For the production of rye, it is totally unsuited; but of barley, oats, peas, grass and roots, when suitably prepared, no soil produces better crops. Their chief value, however, is for grass lands, and when properly put down in meadow, they ought never to be disturbed, as with good management, they will be in a constantly improving state, and afford the most profitable and remunerating returns. But while in this condition, no animals should ever be suffered to graze them, and especially while the ground is soft. Poaching is destruction to them, and no scarcity of other food, will justify the farmer in driving his cattle upon his meadows, while saturated with water. It is a common opinion by those unaccustomed to them that clay lands will not produce good clover; yet we have never seen better clover, or larger crops, than we have repeatedly raised on them.

When required for roots, corn, or other hoed crops, the soil should be well charged with manure, and the most thorough tillage will be amply repaid. "A little land well tilled," has a peculiar signification when applied to this kind of soil. Plaster, (sulphate of lime) has no appreciable effect on it when applied in small quantities; and lime, (carbonate of lime,) has less than on any of the lighter soils. Ashes are valuable on any land, and we believe, under all circumstances; yet we have repeatedly made the application of them on a very stiff clay, without deriving any immediate perceptible benefit. A longer time is required under certain circumstances, for them and other manures to act, but their action continues through a much longer period.

Different varieties of Wheat and its Cultivation.

In an interview we recently had with General Harmon, of Wheatland, Monroe Co., he communicated some important facts, from his own experience, on the culture of the different varieties of wheat, and as this kind of practical information is what we deem most valuable for our readers, we shall give the substance of his remarks, with such additions as we deem particularly deserving attention.

The kind of wheat General H. has been cultivating with great success for the last few years, is what he calls the *improved Flint.* It was first introduced into Western New York, in 1822. It is peculiarly hardy, withstanding the effects of winter remarkably well. When first introduced, it was exceedingly subject to lodging, but the effect of culture has tended to remove this difficulty, and the straw has become sufficiently strong to sustain the weight of the grain till cut. The heads also were at first short, but they have become longer and heavier by careful cultivation. The wheat is very plump and white, and the flour will produce a greater quantity of bread than any other kind he cultivates. It yields from 20 to 25 bushels per acre, with ordinary attention, and averages 63 lbs. per bushel. It is less liable to rust than any other kinds, excepting the Kentucky white beard. The berry is retained in the head with more tenacity than any other wheat, which is an important item with extensive wheat-growers, who cannot of course, cut and secure all their wheat just at the time it is best fitted for harvesting. When wheat was threshed with flails, this peculiarity was a great objection; but the introduction of threshing machines since, has entirely obviated it. This variety he esteems the most highly, and he raises from 1000 to 1500 bushels of it annually, allowing no other kinds to come in contact with it, either in the field, ricks, or granary. The greater portion of his crop is sold as seed wheat, for which, he charges two shillings per bushel above the selling price of ordinary grain, which intelligent farmers consider low enough for an article, that in addition to its being the best of its kind, they are certain is free from all mixture with other varieties, smut, chess, cockles, &c.

The *old Genesee Red Chaff*, a bald white wheat, he considers the next best. This was introduced into Clinton, Monroe Co., in 1798, and till 1820 was the leading and favorite crop. Since that time, however, it has been peculiarly liable to rust and blasting; yet many farmers continue to cultivate it extensively, and not unfrequently get a large product. In former times, it yielded some of the largest crops ever obtained at the west. Peter Sheffer, of Wheatland, once raised 40 acres of this wheat, which averaged 62½ bushels per acre; and in 1833, General H. raised 67¼ bushels from one bushel, sown on 1⅓ acres of ground.

The White May of Virginia, is another valuable variety. It was sent him by Mr. Coke, of Virginia, in 1837. This was the principal, and perhaps the only crop raised about the Chesapeake Bay, in 1800, and for some years subsequent, but is now said to be nearly, if not quite, extinct in that region. It has a fine, white berry, is quite heavy, having weighed 66 lbs. to the bushel, is prolific, and a good bearer. Its great excellence consists in its early maturity, by which it escapes rust. Wheat that does not ripen before the 20th July, is very liable to this.

The Wheatland Red is one of several species produced by General H., from the last mentioned, under the following circumstances. One quart was sown in the spring, which produced ten quarts of badly shrunk wheat. This was again sown, and the crop consisted of several different kinds, though carefully kept from intermixture with any other species. From these, he selected the Wheatland Red, which produces a large reddish berry, and ripens nearly as early as the Virginia May.

The Kentucky White bearded, called also, *Hutchinson Flint*, and *Canada Flint*, was introduced into Scipio, Cayuga Co., eight years since, and is now spreading rapidly over Western New York. The berry is short and plump and very white, and has weighed 64 lbs. per bushel. It is a fine yielder, hardy, doing well when sown late, but requires to be sown thicker than the Flint, as it does not tiller as well. One and a half bushels per acre, is the least that should be sown, while of the former, one and a quarter bushels is the quantity usually sown. Unlike the *improved flint*, too, it shells very easily, and unless secured when quite green, it suffers much loss in harvesting.

The English velvet beard, or Crate wheat, has a strong, coarse straw, large heads, a good berry of a reddish hue, and is much cultivated on the rich alluvial bottoms of the Genesee Valley, its peculiarly firm straw preventing its lodging. It is a fair yielder, and tolerably hardy, but its redundant beards are a great objection to its general introduction on lighter lands.

The Bellevue Talavera, (English,) has been cultivated by General H. for two seasons, from imported seed. The first year it was plump and fine, but the present year, it is somewhat shrunk. It was sown thin, and was consequently late, which was the cause of rust, and subsequently shrinking. It has a heavy, large and white berry, and the heads are peculiarly large and fine, being equal to the choicest specimens of any other kinds. In England, it ripens early, and in consequence of its heavy head, it bends the straw very much, which however, does not prevent its perfectly maturing the grain. In this country, it produces a stiff straw, and maintains an upright position.

The White Provence produces a long, white plump berry, is a fair yielder, but has a slender straw, which is the cause of its frequently lodging. Like the improved flint, it is quite possible that careful cultivation may alter this peculiarity, and hereafter furnish a stalk sufficiently strong to sustain it.

The Yorkshire or English Flint, or as it is more generally known in Western New York, the *Soules' Wheat*, resembles in its general characteristics, the old Genesee wheat before mentioned. The heads are long, berry white and plump, and being a new variety, it has done very well since its introduction into the country, some five years since.

The Scotch Potato Oat which has been cultivated by General H., for some time, he considers a valuable variety. It has grown to the height of six feet and nine inches, and not unfrequently averages six feet on good, strong soil. The stalk is strong, and the head full and heavy. Its weight has averaged 44 lbs. to the bushel, for the last five years; 50 bushels per acre by measurement, he considers its average yield, though six acres have averaged 76 bushels per acre. He considers this a decided improvement over the ordinary oat. His system of cultivating this crop, is to sow after corn or potatoes, which have been well manured.

The system of wheat cultivation generally adopted in Western New York, is this. The wheat is sown in a clover turf, or summer fallow, from the 10th to 15th September. The quantity of seed is usually one and a quarter bushels per acre. Sowing a larger quantity produces a finer straw, with shorter heads, and earlier maturity, but does not, on the whole, afford a greater yield. If sown earlier than the time above specified, it is liable to the attack of the Hessian fly. This is an insect that appears at all seasons, contriving to get its living from other sources, when wheat is not to be found, but particularly productive and abundant when this crop comes forward early in the fall. The grain worm has not yet infested the fields in the western part of our state. If sown later than 15th September, it does not root as well, thereby exposing it much more to winter killing, and it does not tiller as well, by which it matures later, and is more liable to rust. The wheat ripens from the 7th to 27th July, averaging from the 15th to 20th; and it should be cut as soon as out of the milk, when the berry yields easily to the pressure of the thumb and finger. As good a wheat crop as was ever raised at the west, was produced in the uniformly cold season of 1816. It is probable that the superior wheat of England is owing to the longer time required to ripen it, by which, the berry is enabled to fill up more moderately, but much more effectually. Our warmer summers, on the contrary, push it forward so rapidly, that it does not have time to mature so large, full and complete a grain.

Before sowing, the seed should be washed in strong brine, which may soon be turned off and a quart of lime to every bushel is then added, and intimately mixed. After standing a few hours, say 12 to 24, it should be sown. When very smutty, the wheat should receive three thorough washings in strong brine, and lime as before, and this has been found effectual in securing the future crop from smut. Hatch's machine is used to some extent in sowing wheat, and all other kinds of grain broadcast, as also plaster. With this a boy will sow about 20 acres a day, and more evenly than can be done by the most experienced sower. It costs $40, and is easily kept in repair. The seed does better by changing, and especially from poor lands to richer, and as the land General H. cultivates, was once oak openings, which, but for the limestone in them, would be justly reckoned among the most barren lands, seed taken from his soil may be expected to do well. When he first commenced cultivating his present farm, it had been so much neglected, that the produce was about one-third each, of wheat, chess, and cockle. A careful extermination of every unclean weed, has entirely eradicated them from his land, and he is now wholly indebted to his neighbors for whatever occasionally intrudes upon him.

The following spring after sowing the wheat, 7 or 8 lbs. of clover are sown per acre; either the large Northern or Vermont clover, or the medium Ohio is preferred. This may be lightly pastured in the fall. The following season it may either be pastured, or a crop of hay taken from it, according to the strength of the land. The subsequent growth after cropping, is turned under with the plow in August, with a flat furrow, on which the seed is sown and then harrowed. If the field is foul, or filled with June or blue grass, (which are synonymous terms,) and especially in a wet season, it should be turned over in June, and afterwards cross plowed with a cultivator from one to three times, to exterminate all grass and weeds, and again cross plowed the last of August, preparatory to sowing. The general rule, however, is to allow the land to lie two years in clover, which gives a three years' course, one of wheat and two of clover, and under this cultivation, with the addition of plaster, the land has been rapidly improving for twenty years. The soil in the neighborhood of General H., is a sandy or gravelly loam, sometimes inclining to a clay loam, and is always mixed with an appreciable quantity of lime. In its original condition, it was a very light soil, and of yellowish color, but with the judicious system now practised, it is constantly growing darker and richer. The soil is not well adapted to peas and barley, they requiring a larger proportion of clay. Corn, oats, and roots, are raised only for home use, constituting occasionally a part of the food of the cattle.

In an experiment of *sowing corn broadcast*, on the 1st June, at the rate of one and a half bushels per acre, on rich land, General H. obtained 18 tons of green stalks per acre. The stalks were small, and almost entirely without ears, and so full of saccharine matter, that the cattle ate them perfectly clean when dry, though uncut. The yield was estimated at 6 tons dry fodder per acre, and was raised on a clover sod turned over and sown the last of May, and the corn cut Sept. 15. We should like to see the record of some well attested experiment, as to the relative nutrition of equal weights of corn fodder so raised, and good hay. The comparative value given in our last, from experiments in France, would probably not apply to corn raised in the above manner, as the saccharine matter, which goes to supply the corn in the ear, is retained in the stalk, and adds materially to its nutritive properties.

General H. has left with us all the foregoing varieties of wheat, and the potatoe oats, which we shall be happy to show to such of our readers, as are desirous of comparing with their own specimens. Wheat being the staple crop of an extensive section of the United States, and a particular object of attention in all, it is of great consequence that the best kinds are secured for cultivation.

Silk Raising.—(*Continued.*)

FEEDING.—Under this head, we cannot do better than to give some of the judicious observations of Mr. G. R. Smith. He says: "The young worms are very easily removed from the hatching table, by laying small mulberry leaves upon them, and when they attach themselves to them, take each leaf by the stem, and lay it on the shelf where you want the worms. Feed the young worms by laying on them a few fresh leaves four or five times a day, or oftener, if they consume them, or the leaves become wilted. During the first age, if the leaves are large, they may be torn, or cut into small pieces; but if you have plenty of leaves, it is not necessary. After they have moulted the first time, lay on leaves, and when the worms become attached to them, lift them by the stems and lay them on a clean place on the shelf, allowing them about three times as much space as they occupied before. You may then clear off the shelf previously occupied by them. The same operation may be performed after the second, third, and fourth moultings, extending the space they occupy each time, as in the first, and clearing off the litter in the same way.

In feeding the worms, from the beginning to the end, it is of importance that they be fed often and in small quantities. If you lay on too much food a considerable portion will be wasted; but that is the least consideration—the shelves will become loaded with rubbish, which will render it necessary to clear them often. We have always found it to be a good plan to keep the attendant continually feeding—always passing along the shelves with a basket of leaves, and whenever any of the worms are found without food, or nearly so, lay on a few leaves, and thus keeping them continually eating fresh leaves. We know it is the practice almost universally, to feed at stated times—three times a day, or four, or five, and to weigh the leaves, giving at each feeding a certain quantity; but all our experience goes to prove its impropriety. Late at night a full supply of leaves, according to their age, ought to be given them, that they may have plenty during the night. Strange as it may appear, many persons suppose the worms do not eat much at night; the truth is, they eat rather more at night than in the day-time, as do all caterpillars; and they ought either to be fed occasionally during the night or have a supply given them over night sufficient to last them till morning.

Wet leaves should not be given to silk worms, nor those having sand or dirt on them. If it cannot be avoided during long rains, necessity of course will compel the feeding with wet leaves; and generally, this may do no harm; but I have seen very large quantities of worms destroyed by it. It should always be avoided, if possible.

The moulting of the worms will occur four times, but unless closely observed, and the several days' hatchings have not been kept carefully separate, these changes will be scarcely noticed. The times of moulting vary, according to the treatment the worms receive. If fully fed, and a proper temperature be kept in the room, they will moult about every five or six days; if a contrary practice be pursued, they may do so every seven, eight, or nine days. If each day's hatching have been kept by themselves, and they have all been properly fed, all the worms of one hatching will generally moult about the same time, and they should not be fed while they are in the moulting state. They generally remain in this state from eighteen to thirty-six hours. As soon as they revive they should be fed, as above directed, with large leaves, or even branches, and as soon as they attach themselves to the leaves, they should be removed to a clean shelf. It is frequently the case that only a part of them moult one day, and the balance the next. In this case the two moultings should be carried to separate shelves, and thus be kept separate in future, as they will otherwise not spin cocoons regularly. As the space occupied by the worms must necessarily be extended as the worms grow, the most convenient time for doing it is after each moulting. And if this be properly done, all the worms on each shelf can be made to spin at the same time, and thus save the attendant much inconvenience. To effect it, all that is necessary, is to separate the several days' hatchings, and at each moulting to collect all that revive at one time, and place them by themselves. Those who observe this precaution will be well paid for their attention.

After the fourth moulting, if you have plenty of trees, and do not care about the waste of cuttings, you may cut off small branches with the leaves on, and lay them on the shelves. In feeding in this way, you can save much time, the leaves keep from wilting longer, and more worms can be accommodated on the same space. The branches should be laid first across the shelf, say six inches apart; at the next feeding they would be laid lengthwise of the shelf; and the next crosswise again, and so on alternately crosswise and lengthwise at each feeding, so that the pile may form a mass of crib-work, affording a free passage for the air, and accommodation for the worms, into which they will descend, to form cocoons. The objections to this plan are, that in damp weather the mass of rubbish and dung of the worms, is apt to ferment, and thus produce disease; and also the loose tow of the cocoons is lost, as it becomes so filled with dirt and fragments of leaves, that it is not worth saving. It is believed, however, that the value of this tow is less than the trouble of the ordinary fixtures for the worms to spin on is worth. The writer of these remarks, raised his silk worms one season on this plan, and the cocoons produced were equal to any he ever raised. Care should be observed in feeding in this way, not to lay on so many branches as to raise the pile too high; as, if it approach near the bottom of the shelf above, before the worms are ready to spin, it will be very inconvenient to feed them. Not more than four or five courses of branches should be laid on each day, and the intermediate feedings should be with clear leaves, so that the pile may ascend not more than an inch and a half each day, and that the height of the pile on the shelf when the worms begin to spin may be about nine or ten inches. If, however, the pile should get too high, or if it gets damp and mouldy, the lower part can be easily removed by passing a couple of smooth sticks through the pile two or three layers below the worms; and by means of these, gently raise the upper layers with the worms on, and remove all below. We found no difficulty in cleaning our shelves in this way.

During the whole time the worms are feeding, attention should be paid to cleanliness—that is, the room should be kept free from filth and bad smell. In very hot weather, the windows should be opened to give free air; and in cold damp weather, if it can be done, fire should be kept in the fire-place. It is proper to observe, that unless the weather be very cool, no other injury will be done the worms than stopping their feeding and growth during its continuance. We have had weather so cold, as to produce thin ice in our cocoonery, without other injury to the worms, than stopping their growth a few days; that is, it required two or three days longer to produce the cocoons than it would have done, had not the cold weather occurred. Therefore, though it is always better to keep the room moderately warm, by fire, if necessary, yet it is not indispensable to very fair success.

If disease occur in the worms, particularly the yellows, the best way is, to take the sick worms from the shelves, and throw them away as soon as they are discovered. The yellows, is both a contagious and hereditary disease; and hence, if one worm is attacked by it, it will be sure to be communicated to the others; and worse than this, even if the sick worms get well, which they seldom do, the eggs they produce are almost certain to produce sickly worms, and by this means, the crop of the succeeding year will be lost.

When it can be done, one or two days' supply of leaves should be gathered ahead, and kept in a cellar, that no damage may be sustained during rainy weather. But great caution should be observed not to feed with *wilted* leaves. It were better to give the worms wet leaves than wilted ones. If kept in a cellar and occasionally shook about, the leaves will keep three days in good condition. Where no cellar is at hand, and where you have plenty of trees, you can keep leaves fresh three or four days, by cutting off the tops and branches of the trees, and setting the butt ends in water. If the end of a branch be set in water one inch deep, it will keep the leaves fresh. For this purpose, tubs might be used, and large quantities of leaves kept in this way.

The sun should never be allowed to shine on the worms; and if any of them are exposed to it, the window should be so shaded by shutters or blinds as to prevent it.

Successive crops may be fed, if it be desired to occupy the whole season, by keeping the eggs in an ice-house, and bringing out portions of them at each time of hatching. It is believed, that this is a much better plan than commencing with the whole at once. All new beginners should commence in the spring, with one-half an ounce of eggs, to be hatched as soon as the leaves put out. From the cocoons formed by this crop, eggs for next year's use should be saved, and reelers should be taught. The very best cocoons should be selected to produce eggs."

When the worms have finished eating, and are sufficiently matured for spinning, they will be seen to raise their heads, apparently seeking some place to wind their cocoons. A suitable place for this, Mr. Smith suggests, is the crib work formed by the alternate cross layers of the mulberry branches, which have been properly arranged while feeding. In addition, some use small bundles of clean straw, with the heads cut off, and tied at the top and sufficiently spread at the bottom to allow the worms convenient accommodations for winding. These are kept securely in their places, by being so cut as to touch both at the top and bottom between the shelves, and from this straw they are easily gathered without any loss to the cocoons. Branches of green poplar leaves, as recommended on page 49 of our paper, or boughs of oak leaves, are suitable for the worms in winding their cocoons.

After remaining about eight days, a sufficient number of the best should be first selected for eggs, and as nearly as possible equal numbers of males and females, the first generally being indicated by one pointed end, somewhat drawn in at the middle, while the latter is nearly alike at both ends. The cocoons may be at once reeled if convenient; but if they are required to be kept for any length of time, the chrysalis must be stifled, which is effectually done by exposure in a hot sun for two or three days; or, by baking in an oven at not too great an elevation of temperature. They should then be carefully laid away beyond the reach of mice or other vermin, in a dry, safe place.

In about fourteen days the millers come forth and couple; after a connection of twelve hours, they should be carefully separated, and the males thrown away, unless there is a deficiency, in which case, they should be retained for further use; but it is believed the worms are not, in all cases, as good, which are produced from the male when used a second or third time. Soon after the separation, the female discharges a brown substance, after which, she is to be placed on a clean paper or muslin, and laid carefully away in a dark place. She soon after lays her eggs and dies. The directions for the preservation of the eggs have been given before on page 206 of our paper.

Reeling.—This is the next process to be accomplished, and is an operation that should always be done, when possible, on the premises where the worms are raised. The reasons are, that it is easily performed where a moderate share of intelligence, care, and perseverance are used; there is a great deal of profit in it; and the cocoons are liable to injury when moved to a distance. The common reel in use is the Piedmontese, which is, perhaps, as simple a plan as can be adopted. Some modifications of this have been made in other machines in general use. At an extensive manufactory in Ohio, the circumference of the reel is invariably 4 feet, which prevents tangling; and it is considered by them to be *indispensably* necessary to limit the reel to this size. We here give the latest French improvements for this purpose.

Fig. 16.

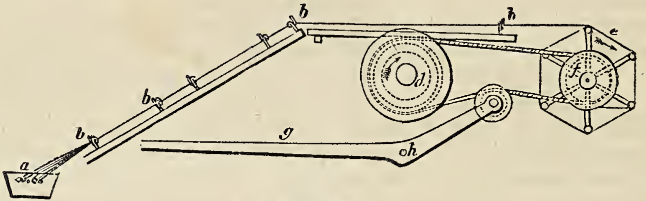
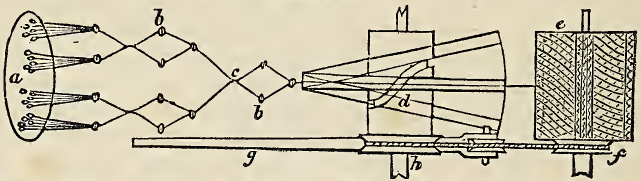


Fig. 17.



The mechanism of the filature, as lately improved in France, is very ingenious. *Figs.* 16 and 17, exhibit it in plan and longitudinal view. *a* is an oblong copper basin containing water heated by a stove or by steam. It is usually divided by transverse partitions into several compartments, containing 20 cocoons, of which there five in one group, as shown in the figure. *b*, *b*, are wires with hooks or eyelets at their ends, through which the filaments run, apart, and are kept from ravelling. *c*, *c*, the points where the filaments cross and rub each other, on purpose to clean their surfaces. *d*, is a spiral groove, working upon a pin point, to give the traverse motion alternately to right and left, whereby the thread is spread evenly over the surface of the reel *e*. *f*, *f*, are the pulleys, which by means of cords, transmit the rotatory movement of the cylinder *d*, to the reel *e*. *g*, is a friction lever or timber, for lightening or slackening the endless cord, in the act of starting or stopping the winding operation. Every apartment of a large filature contains usually a series of such reels as the above, all driven by one prime mover; each of which, however, may by means of the tumbling lever, be stopped at pleasure. The reeler is careful to move any slight adhesion, by the application of a brush in the progress of her work.

The whole expenses amount to from 6 to 7 livres upon every ten pounds of cocoons; which is about 50 cts. per pound of raw silk.

The cheapest and simplest machines are best adapted for general use. The directions for reeling we add from Mr. Whitmarsh: "The water for reeling must be *soft* and free from sand or dirt. The degree of heat must be graduated by the state of the cocoons; no definite rule for it can be given. As a general rule, the water should not boil, but be kept nearly at the boiling point. If the water is too hot, the silk will come off in burrs, and it must be cooled; if too cold the cocoons fly up to the guide wires.

Press the cocoons *gently* under the water with a bunch of twigs or broom corn; the ends will adhere to it. After collecting a sufficient number, pull off the coarse silk till it runs clear. When another thread is collected in the same way, cross them eight or ten times, before going to the reel. You will then pass the threads through the guide wires to the reel, attaching them in two places for two skeins. Turn the reel *steadily* and rapidly. Join the ends constantly as some run out or break. Keep the water clean by taking out the skins with a skimmer. The water must be changed twice a day. The silk should be left on the reel to dry rapidly.

The most convenient way to heat the water is by steam. Make the basin double, one within the other, leaving a space of an inch for the steam to pass in at one end and out at the other. With a stop-cock in the pipe, you may have full command of the heat and regulate it at pleasure. A small boiler heated by a lamp, would answer every purpose for domestic use; it is certainly to be preferred to a furnace of charcoal."

Reeling is an important operation, and must be well and evenly done, if a fair price is expected for it in market; but it is as easy to do it well as ill, and there is no difficulty in it with proper care and attention. Mr. Deane, in a communication to Mr. Smith, says:

"From motives of shere curiosity I attached the fibre of a cocoon to the bars of a common reel, and with a gentle movement began to turn. It ran off, and I turned faster and faster until the revolutions drew out a thread nearly one mile in length. The discovery unfolded by this simple manœuvre determined me to follow up the subject, and having no means of procuring a suitable reel, I constructed one after my own fashion. I arranged all things for a fair start, and to my astonishment I soon disengaged a couple of skeins of surpassing beauty. The experiment satisfied me that there were no complex principles to overcome, but that by the observance of a few plain directions, all impediments to success speedily vanish. I was surprised to witness the facility with which cocoons are unwound, but I was surprised by the novelty merely. To produce a perfect filament from wool or cotton, requires the perfection of machinery and skill, but here we have formed to our hands a thread which no art can approximate, and all we have to accomplish is the union of a certain number of these ready made threads by a process easily comprehended and attained by any intelligent mind.

I continued my operations until I completed two pounds of silk, one part of which I sent to the Fair of the Massachusetts Charitable Mechanics' Association, and the other part to the Fair of the American Institute, and from each of these noble institutions I was honored with their silver medal. I mention these things as a voucher for the quality of my first production in this delicate art. What I have thus accomplished without ever witnessing the method, it is in the power of all, particularly the young women, for by the delicacy of their fingers, their patience and perseverance, they may easily acquire perfection in the beautiful art that should engage their especial attention."

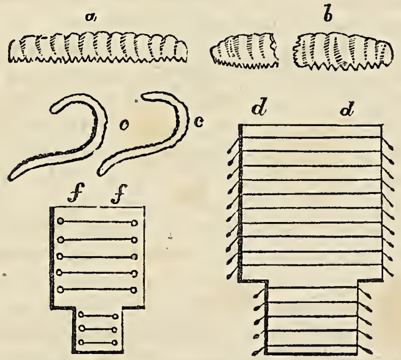
Another description is given by Mr. Smith of an old gentleman who had never seen the operation performed.

"He had constructed a Piedmontese reel, from the drawing and description in the Silk Journal, and placed it in a back room for the purpose of giving it a fair trial. He had carefully studied all the directions for the operation, and prepared himself to carry them out literally. After some difficulty, he had caught the fibres of as many cocoons as he wished to combine in a thread, had got the two threads passed through the eyes of the plate, and even passed them around each other twenty times, as directed, before passing them through the guides of the traversing bar on to the bars of the reel. At last all was ready. He looked at the cocoons, at the threads, *wound around each other*, and at the reel, with doubt and hesitation. 'It will not do,' said he, 'surely those threads wound round each other in that manner cannot pass freely—they must break with a slight turn of the reel.' He at last ventured to touch the crank gently—the thread passed freely, and he was encouraged to turn a little faster, when it passed off still more freely. Thus encouraged, he turned the reel faster and faster, increasing by gentle degrees, till he put it into full speed; and the faster he turned the more freely the thread passed, and the more easily the cocoons unwound. He was so delighted with his experiment, that he called in his family to witness his success—for he had made the experiment in private, that he might not be exposed to the laughter of observers, in case of failure. He then proceeded, with the aid of one of his family, and reeled a skein of raw silk according to directions, and sent it to a neighboring city, where there was a person, a foreigner, who was considered a good judge of raw silk. The silk was shewn to him, and he pronounced it *Italian raw silk* of excellent quality, and insisted that the skein exhibited was reeled in Italy, and could not have been reeled in this country. After, however, he was assured that it had been produced here, and he was requested to point out any fault it might exhibit, he discovered that the thread was occasionally *loose*. That is, there were spots occasionally, in which the fibres remained unconnected by the adhesion of the gum. No sooner was this fault pointed out than the cause flashed upon the old gentleman's mind instantly. It was this. During the process the reel had been stopped occa sionally for the purpose of replacing exhausted cocoons, &c. and when it was recommenced, he had omitted to *wet* the fibres below their junction at the crossing. The fibres at that point had of course not been brought into perfect contact, and had become dry; therefore when they passed up and through the crossing, they of course did not remain adherent, and hence the thread in the skein presented those spots of loose or inadherent fibres—the perfection of raw silk requiring the several fibres to be closely united by their gum into a cylindrical thread."

The simplicity and ease of reeling silk is detailed thus fully, to take away all excuse for omitting it. We may add a plan for *silk throwing* in our next.

We give here a description for making a new article from the silk worm.

Fig. 18.



Silkworm Gut, for angling, is made as follows:—Select a number of the best and largest silkworms, just when they are beginning to spin; which is known by their refusing to eat, and having a fine silk thread hanging from their mouths. Immerse them in strong vinegar, and cover them closely for twelve hours, if the weather be warm, but two or three hours longer, if it be cool. When taken out, and pulled asunder, two transparent guts will be observed, of a yellow green color, as thick as a small straw, bent double. The rest of the entrails resembles boiled spinage, and therefore can occasion no mistake as to the silk-gut. If this be soft, or break upon stretching it, it is a proof that the worm has not been long enough under the influence of the vinegar. When the gut is fit to draw out, the one end of it is to be dipped into the vinegar, and the other end is to be stretched gently to the proper length. When thus drawn out, it must be kept extended on a thin piece of board, by putting extremities into slits in the end of the or fastening them to pins, and then exposed in the sun to dry. Thus genuine silk gut is made in Spain. From the manner in which it is dried, the ends are always more or less compressed or attenuated. *Fig.* 18, *a*, is the silkworm, *b*, the worm torn asunder; *c*, *c*, the guts; *d*, *d*, a board slit at the ends, with the gut to dry; *f*, *f*, a board with wooden pegs, for the same purpose."

The above cuts and description are from Ure's Dictionary.

Storing Roots for Winter.

It is important that the farmer have roots properly secured for the winter. To such as have not cellars sufficiently large and convenient for this object, the best plan is to store them in some place contiguous to the stock which is to consume them. For this purpose, a piece of ground should be selected, from which the water will run off freely. On the surface of this the roots may be placed, in high conical, or oblong heaps, having an exterior as even and compact as possible. The long roots should be regularly laid up, with the large end on the outside, and in the form of a steep roof, and of the size required, and as these *walls* are carried up, the interior may be filled up with the roots, taking care to give them as much compactness as possible. When the pile is complete, it should first be thatched with straw or hay, so as to conduct to the bottom of the outside, whatever water may find its way to the interior. This should be covered with a coating of clay, or the most tenacious earth that is convenient, to the depth of 4 or 6 inches; or 8 to 12 inches is not objectionable. The first thickness is not sufficient to exclude the frost in moderately severe winters in this latitude, but this we do not consider of consequence, unless the roots are required for use while frozen; as, if kept carefully covered while in this condition, the frost will be extracted gradually on the returning warmth of spring, and the roots will be left in every respect as good as if they had not been touched by it.

Some winters since, we had a large pile of sugar beets carefully protected in the way described, from which we were feeding through the inclement season. They were taken from one end, which was carefully closed by straw whenever opened, but owing to the carelessness of the stock-tender, this was left open for a day or two of the coldest weather, and when we first noticed it, we concluded our crop of one or two thousand bushels, would be completely ruined. We ordered the hole to be closed and examined the other end and sides, but from the inadequacy of the covering, and the free circulation of th air inside, the roots had become frozen as far towards the centre as we examined. Of course we looked to the ruin of the heap as inevitable, which we regretted the more, as it contained the roots intended for seed. We used what we could while thus frozen, and hurried on the consumption as fast as possible, but had made little progess before an unusually early spring had fully established itself. We still kept the pile carefully covered, to prevent the escape of the frost, as we fully expected the roots would go with it. Our surprise may be conjectured, when on visiting the heap one day, we found all the frost gone, and the roots–*every root*–as fresh, hard, and plump and juicy, as when first put up. They kept in this condition till they began to sprout, when those intended for seed were set out and bore as finely as any we ever saw. The remainder were carried to a dry place, where they retained their flavor and full value till the last of May, by which time they were entirely consumed. This experiment taught us that *it is not the freezing, but the sudden thawing that destroys roots, fruits, and vegetables of all kinds.* We have since noticed that apples in barrels may be frozen hard, yet if kept in a cellar or the lower part of a close brick warehouse, and the frost allowed *gradually* to escape, they are uninjured, and trees and many vegetables that are caught by a late frost in spring, or an early frost in Autumn, if shielded from the sun and kept at a low temperature till it has escaped, are not materially injured. For the above reason the experienced cook puts frozen vegetables in very cold water, as near the freezing point as possible, by which the frost is gradually extracted from the vegetables, and their flavor and character remain unchanged.

Potatoes required for summer use, are sometimes buried in dry sandy land at considerable depth, either in the woods or the north side of a hill, and we have seen them taken out from such situations on the 1st of June, as fresh as when put in. Care must, however, be taken, that the soil is such as to hold no water at the bottom, or the roots will inevitably spoil. On clay soil, the only recourse is to have a ditch surrounding the pile, and sufficiently deep to conduct away any water that may fall on the bottom. One or more holes, according to the size of the heap, should be left on the top, which must be loosely stopped with hay or straw, to allow the escape of gas, which is constantly generated from the roots. The above principles are applicable to nearly all vegetables under similar circumstances.

AMERICAN INSTITUTE.

Reports from the Agricultural Department of the American Institute, October, 1842.

Plows and Plowing.—“The following plows were entered for competition:

1st. One by F. L. Wyckoff, of Flat Bush, L. I., Wisconsin plow. 2d. One by Cornelius Bergen, Brooklyn, L. I., Bergen self-sharpening plow. 3d. One by Minor, Horton, & Co., Peekskill, N. Y., M. H. & Co's., No 22 plow. 4th. One by Philip S. Crook, Brooklyn, L. I., Bergen plow. 5th. One by Charles Howard, Hingham, Mass. 6th. Also for exhibition and plowing, by Mooers & Slater, Ithaca, N. Y., Side-hill and level land plows.

The ground upon which the plows were tested, was a clayey loam, quite dry and hard *at the surface* without much sward, and unfavorable for smooth and handsome work. It required, however, less power of draft than would be requisite in most soils.

The competitors were requested to turn furrows each twelve inches wide and six deep. The following table gives the power required for each plow, and also the weight of the plows.

	Average power.	Weight of Plow.
F. L. Wyckoff's Wicsonsin,	335 lbs.	140 lbs.
C. Bergen, self-sharpening,	332½ “	131 “
Minor, Horton & Co's., No. 22	325 “	139 “
Philip S. Crook's, Bergen plow,	312½ “	124 “
Mooers & Slater's, side-hill,	335 “	166 “

C. Howard's, sent by him from Mass. did not arrive.

After testing the draft and examining the work executed by the several plows at the trial for *plowing*, the Judges decided unanimously, that of the plows entered for competition and tried by them, that

Minor, Horton, & Co.'s No. 22 is best.
F. L. Wyckoff's Wisconsin is next best.

Mooers & Slater's side-hill and level land plow, entered for exhibition, is an implement of ingenious construction, which accomplished its work well.

This last plow was not entered for competition.

Plowing.—At the trial of plowing, there were four regular entries, and the lots were drawn as follows, viz:

No. 1. By Cornelius Bergen, Brooklyn, L. I., self-sharpening plow.
No. 2. By Philip S. Crook, Brooklyn, L. I., Bergen pl.
No. 3. By Mooers & Slater, Ithaca, N. Y., side-hill pl.
No. 4. By F. L. Wyckoff, Flat Bush, L. I., Wisconsin plow.

Each of these plows was drawn by a span of horses.

No. 5. Minor, Horton, & Co., of Peekskill, N. Y., who had made no arrangements for plowing, allowed their plow to follow a yoke of oxen picked up on the spot at the moment, and indulged Colonel W. L. Stone, of New York, with the privilege of acting as plowman.

Each lot as staked off, was about 210 feet long, by 27 feet, and contained about one-eighth of an acre. The texture and condition of the soil, were the same as that on which the draft of the plows had been tested.

After an examination of the work, the Judges unanimously decided that lot No. 3, plowed by Mooers & Slater was best.

No. 4, plowed by F. L. Wyckoff, second best.
“ 5, “ Minor & Horton, third best.

JEREMIAH JOHNSON, New York.
ALLEN PUTNAM, Massachusetts. } *Committee.*
PH. SCHUYLER, New Jersey.

Corn and Oat Crops, belonging to Mr. F. I. Betts, of Newburg, N. Y., to which was awarded the first Premium.

Field Crops—*Corn.*—The soil was a very tough green sward, having been several years laid down to grass and occupied for pasturage. From the 4th to the 8th of February last, the ground then being entirely free from frost, the whole field was thoroughly plowed; in the second week in May, two bushels of salt and fifteen wagon loads of manure per acre, were spread broadcast over the field, and the field was then thoroughly cross-plowed and harrowed, and the corn was planted in hills, (the hills being between three and four feet apart,) each hill being covered with about half a shovel-full of manure; the only subsequent cultivation was plowing and hoeing twice and going once through it with the cultivator.

On the 19th of September, the corn was cut up close to the ground and put up in shocks of an equal size upon the field; and as it is not yet husked, the only practicable mode of ascertaining the quantity of the product, has been fairly and justly pursued by me as follows, to wit:—I have husked twelve of the shocks from different parts of the field, taken indiscriminately, and averaged the whole crop according to the quantity produced from them, and find that the field (containing by accurate measurement, four acres, two roods and twenty-three perches of land,) has produced nine hundred and fifty and two-third bushels of ears of corn, equal to two hundred and five and a half bushels of ears per acre. As a portion of the field was injured by the frost in June last, the best acre no doubt exceeded in product the foregoing average.

Oats.—The soil had for many years previous to 1841, been laid down to grass, and the field occupied for pasturage; in the spring of last year, the field was planted in about equal proportions with potatoes and corn, and had then applied to it about twelve loads of manure, (a compost of muck and barnyard manure,) per acre.

About the 23d of April last, the field was well plowed, and the oats on the same day were sowed at the rate of three bushels to the acre, and were harrowed in, which was the only labor expended upon the field, until the crop was harvested.

An acre of the field was accurately measured before the crop was harvested, and the grain therefrom has been kept and threshed by itself and produced seventy-seven bushels of clean oats. The whole field contained about three and three-quarters acres, and the grain thereupon was about equally good throughout the whole of it. The undersigned cannot close this report without calling public attention to the judgment and good taste which Mr. Betts has displayed in the irrigation and fertilization of the soil, the subdivision of his farm into lots of convenient sizes, their entire exemption from vegetable excrescence, and to the neatness, order, and cleanliness which is presented in every department of his establishment. This farm contains about one hundred and twenty acres, and may, in the opinion of the undersigned, be refered to as a pattern farm, every way worthy of imitation.

Corn.—In respect to the field of corn which belonged to Mr. Carman, the undersigned, not finding that gentleman at home, are unable to give any of the details respecting its cultivation, except that they learned from a laborer who had assisted in working the field, that it had not received any extraordinary manuring or attention. They computed the product of this field at eighty bushels of shelled corn to the acre. The farm of Mr. Carman appeared well arranged and in good condition and merits particular notice.

EDWARD CLARK, Chn. }
MARTIN ELLSWORTH. } *Committee.*
NICHOLAS WYCKOFF. }

New York, October 22d, 1842.

Horticultural—*Cabbages.*—The Committee on the 8th Sept. 1842, examined a field of Cabbages of about twenty acres, comprising part of the farm of Mr. Lambert Wyckoff, at Bushwick, Long Island. The plants having been set out about three feet apart, early in the spring, had arrived to good maturity, and although a great proportion of the crop had been sent to market, that part which remained was uniformly in fine condition. A dozen cabbages were selected from less than an acre of land, the average weight of which was twenty-four pounds nine ounces and a quarter. On perambulating the farm, a bed of the Red Pickling Cabbage was presented to our view; from which we selected half a dozen heads, the average weight of which was twelve pounds nine ounces and a quarter; being one-third more than the usual average weight of this description of cabbage. These crops reflect great credit on the gardener, Mr. Peter Hultz, who is an adept in the culture of cabbages, he having been eminently successful in producing superior crops, during the last two or three years. From the above considerations we suggest that the proprietor, Mr. Lambert Wyckoff, be presented with a Silver Cup, as a memento of his indefatigable zeal in cabbage culture.

On the 23d of September, 1842, your Committee visited by invitation, the farm of Garret Vreeland, where we found on about three acres of land, a crop of cabbages, in a medium stage of growth, which bid fair to arrive at full perfection by the month of November, which is the ordinary time of gathering them for market. It may be here remarked, that the land in this section of country is of very rich and fertile quality, being literally embedded with the shells of oysters. So congenial is the soil to the growth of cabbage, that the roots of this plant are seldom attacked by insects, which prove so destructive in less favored situations. Hence perpetual, vigorous, and healthy crops are gathered from the same beds, arising from the great quantity of nutritious matter, mingled in the earth by remote causes. The plan generally adopted, is to plant a little over two feet apart, by which means they produce, on the average, from eight to nine thousand cabbages per acre. In some parts of Long Island, or in other sections, where the land is less fertile than that of Bergen County, it is customary to plant cabbage about three feet apart, and to deposit a shovel full of animal manure in each hill, hence the result is a growth of heavier and larger heads, from the facility of expansion—though the greater number grown in the same space by the "Men of Bergen" will perhaps equal, if not exceed in weight the crops of their neighbors on Long Island.

After surveying Mr. Vreeland's crop, we took a circuit of three miles around the southern part of Bergen Township. In the course of this short ramble, not less than six hundred thousand heads of cabbages, fresh, vigorous, and thriving, came within our view. A finer display in the same space could not perhaps be exhibited in any part of the world. We could not depart from the scene without heartily wishing health and prosperity to the independent cultivators of this excellent vegetable, which has long redounded to the fame of the Krout fraternity of Bergen, and furnished a most important and indispensable dish to the tables of every citizen in our great metropolis.

Subjoined are the names of the cultivators above alluded to.

		Acres.	Cabbages
Garret Vreeland,	about	3	25,000
George Vreeland,	"	9	70,000
Jacob Vreeland,	"	3	25,000
John Vreeland,	over	1	10,000

		Acres.	Cabbages.
Stephen Vreeland,	about	8	60,000
George Vreeland, Jr.	"	3	25,000
Michael Vreeland,	"	3	25,000
John M. Vreeland,	"	2½	20,000
Henry Brinckerhoff,	"	2½	20,000
Cornelius Brinckerhoff,	"	1½	20,000
John Brinckerhoff,	"	2½	20,000
John Van Horn,	"	6	50,000
Mr. Prichard,	"	3	25,000
John J. Van Horn,	"	3	30,000
John G. Van Horn,	"	3½	30,000
Myndort Van Horn,	"	3½	30,000
John G. Van Horn, Jr.	"	2½	28,000
Myndort Vreeland,	"	2½	20,000
Abm. Vreeland	"	3	25,000
Richard Vreeland,	"	2½	20,000
Jacob Stultz,	"	3	25,000
Abraham Post,	over	1	10,009
Mr. Bell,	about	2	15,000
Mr. Jackson,	"	2	15,000
	TOTAL—about	77½	630,000

Turnips.—On the 20th of September, 1842, your Committee visited the estate of Mr. John Jones, near Hurlgate, New-York, for the purpose of inspecting a Field of Turnips. Your Chairman having furnished the seed for this field on the first of August, being but seven weeks previous, was astonished at the perfection to which this crop had arrived. His associates were also delighted at the extraordinary regularity of their growth, the refreshing greenness of their tops, and, tempted to test their quality, pulled several of them from the earth, which averaged from ten to twelve inches in circumference, and were of a delicious flavor. Two pecks of these turnips were forwarded to the Horticultural room October 8th, some of which measured eighteen inches in circumference. The grand secret of the prodigious growth, rested on the simple fact of their having been hoed out twice, and cultivated on the English principle. On the above occasion we also visited a field of Indian Corn, on this estate, which had been ploughed through in the usual way, but had not undergone the operation of the hoe. It was in a state of great luxuriance, a great proportion of the stalks being from eight to ten feet in height. Samples of this corn were also forwarded by the proprietor to the Horticultural room of the Institute, together with several fine specimens of culinary vegetables, viz., Potatoes, Onions, &c., which would entitle him to several distinct premiums, but in consideration of their not being entered for competition in distinct lots, the Committee of Judges on Vegetables adjudged a Silver Medal, as a fitting reward for such eminent success in field culture.

Flowers.—The Committee cannot close this report, without awarding their meed of unqualified praise to the disciples of Flora, both professional and amateur, who by the rich displays of the beauties of nature, frequently replenished during the Fair, have rendered the Horticultural room the centre of attractions, which is eminently calculated to stimulate our fellow citizens generally, to pursue that most healthy and enchanting of all recreations, the cultivation of Flowers, an employment which cannot fail to attach man to his home, and thus promote domestic happiness; and it is an indubitable fact, that he who delights in his home, and feels disposed to embellish it, will be likely to hasten to it, when he has done his business abroad, instead of wasting his time in the pursuit of transient and dissolute pleasures, which lead too many of our race to disgrace, misery, and an untimely end.

THOMAS BRIDGEMAN, Chairman.

Oct. 21st, 1842.

GARDEN ORNAMENTS.

"I count the hours that are unclouded."

Mr. Thom's Sun Dial.—This beautiful triumph of art, and which is the oldest method of measuring time, so long a desideratum even in its simplest form, in this highly favored land, will no doubt foster our incipient taste for combining the ornamental with the useful. Throughout the Continent of Europe and the British Isles, gardens are considered as incomplete without a Sun Dial; while no expense is spared in procuring such specimens as may throw all competition into the shade. We have in this piece of Mr. Thom's, all the qualities that excite the admiration of amateurs—the material being brown free stone, similar to that used in Trinity Church, and possesses a softness and susceptibility of imitating nature, seldom to be met with, as may be seen from the most cursory glance at the oak leaves and acorns over the grand entrance to Trinity. It may not be out of place here to state, that the forementioned ornaments are all from the chisel of Mr. Thom, who has under his supervision, the entire mason work of Trinity, which will undoubtedly hand down his fame as an artist, through the stream of time, till many who now consider themselves as greater men, will lie forgotten in the grave. The height of Mr. T.'s Sun Dial is 4 feet 4 inches, the lower portion of the base 21 inches wide, the upper 15 1-2 inches, the shaft 2 feet, and swelling gradually out in the centre, while the capital is 11 inches high. We regret to say that, from the very nature of the case, the highly finished oak leaf ornaments around the base of the capital, will be partly obscured from view by the projection of the square designed for the gnomon. This disadvantage has been seen and guarded against by the raised platfrom, on which Mr. T. has caused it to be placed. Its situation at the entrance of the middle division of the saloon for garden ornaments may have prevented some from seeing it at all, but we doubt not, that its admirable proportions and graceful ornaments have been marked out by the discerning. We say to the artist, in conclusion, look out for orders of a similar kind.

Mr. Pike's Marble Sun Dial.—This garden ornament but for the presence of Mr. Thom's, would have undoubtedly excited particular attention on the part of visitors, and warranted a lengthy notice from this committee. As it is, however, we cannot pass it by, without expressing our obligations to the artist for furnishing us with so fine a specimen. Height 2 feet 9 inches, diameter of top 15 inches, base somewhat smaller, which gives it the appearance of not being altogether symmetrical.

We find in addition to the above, a *Cement Sun Dial*, about 3 feet in height, possessing some good points. Also a cast iron dial plate from the hands of S. Moore, Kensington, Conn., neat and durable. And as the demand for articles of this sort is now on the increase, we may mention still another variety, the plate of which is slate, with a metal gnomon.

Flower and Fruit Stands.—The flower and fruit stands composed of wire, by Mr. Oliver, show him to be a man of uncommon taste. He confines himself to no particular style, but, like nature, exhibits a great variety of phases. His contributions added greatly to the exhibition.

The cast steel Horticultural Scythe of about 2 feet in length, which, though not itself a garden ornament, is nevertheless a very necessary implement for trimming underneath ornamental shrubbery. It supplies what has hitherto been a great desideratum.

Mott's Cast Iron Vases—In pattern equal to the finest Italian models—in durability far superior, and embracing imitations of free stone, granite, and marble. The cheap rate at which they can be furnished, is another and not a small recommendation of this invention of Mr. M. The cost of the cast iron is about one quarter of the marble vase.

The two last mentioned articles, as well as several others under the control of this committee, have made their appearance in consequence of a call from the American Institute, which, like Aladdin's lamp, is destined, ere long, to bring into general use, articles which, at present, would be deemed extravagant even as luxuries.

A beautiful bouquet of flowers, painted in water colors by Miss Hannah Collins. The drawing and coloring of this is exquisite; and the grouping of the flowers altogether exhibits a fine eye for a proper contrast in colors, and charming taste. It is wonderfully true to nature, from which it is drawn.

A Primrose plant and flowers, by the same, correctly drawn and most delicately colored from nature.

A fruit piece, in water colors, by the same delicate pencil—a large rare-ripe peach and a Bon Critian pear, both most admirably executed, true to nature in color and form.

Another fruit piece—Large red cheek peach and sprig of ox-heart cherries, by the same, deserving great praise.

A fruit piece by E. Whitfield.—This is admirably executed. The coloring and grouping very fine.

Another water color piece, by the same. This appears to have been executed with much less care, the colors are too glaring, and the shading in many parts not good. The bunch of grapes in particular, strike us as defective.

Nine small paintings of fruit, flowers, and shells, by the same, exhibit the hand of a master. They are beautifully executed, particularly the centre one representing two pinks, one beautiful blossom color, and the other a white; for a small painting we consider the tints and execution of this equal to anything presented.

The shell pieces of this group attracted the attention of the committee, the exquisite skill displayed by the artist in arranging the whole, so as to resemble a beautiful floral painting.

Two water color drawings from nature, by Mrs. Eliza J. Burr, are most admirable.

Alexander Walsh,
Walter Chisholm, } *Committee.*
John Priestley,

Silk, *raw and manufactured.*—The committee were much gratified to observe a greatly increased number of specimens, including those which were presented for competition, as well as objects of curiosity, exhibiting the ingenuity of the producers. Among the former are many articles well wrought, displaying great skill, and evincing ability on our part, with more experience, ultimately to compete with any part of the world. Even now our cocoons and raw silk, and some of the manufactures of the article, might easily be mistaken for those of Italy, with its centuries of experience in the silk culture. From this addition to the exhibition over former years, the committee are pleased to infer that the practical silk culture did not expire with the speculation in Mulberry trees. *That* mania which was predicted by the opponents of the silk business in this country, as fraught with great evils, has not been without its benefits; instead of filling our fields with useless roots, which the plough could not eradicate, a valuable shrub has been introduced, acclimated, and diffused into the remotest corner of our land, which in its results, will realize to us the fable of the Golden fleece—produce as great a revolution in the agricultural products of our country as the introduction of the cotton plant, and probably in as short a period, will the article of raw silk form an important item in the exports of this country to Europe. With this firm belief, the committee beg leave again to call the attention of the Institute and through them to recommend silk growers to use great care in the selection of cocoons for seed. They again repeat that no cocoon has been brought to their knowledge which exceeds the Peanut variety. Of that variety the worm is hardy, feeds well, comes early to maturity and produces a large amount of silk of a very desirable quality, and in respect to reeling, has a decided preference to any other cocoon which the committee have examined. Some fine specimens are exhibited at the fair, but the committee do not advise that any other notice be taken of them, than to call the attention of silk growers to the Peanut variety and recommend them to raise no others. They would also caution silk growers against crossing this kind with any other variety, as the effect is to produce a less valuable kind, and the interest of the silk growers is to improve the breed instead of introducing new and inferior varieties. Even the Peanut silk worm may be improved by selection and care, and it is hoped all who are interested will take every precaution to prevent deterioration.

A very little care is necessary to produce a great crop of silk, and as it has been demonstrated repeatedly that silk can be made in this country with hired labor and at the price of American labor, (proverbially high! and may it long continue so,) for $2 per pound including all actual expenses of raising and reeling, we may reasonably expect an increased product from year to year, until it shall be brought to our Fair for exhibition in bales instead of skeins. The committee desire to call the attention of silk growers to the propriety of sending, even now, larger parcels for exhibition. A large parcel of uniform quality, ought to be entitled to the highest premium of the Institute. Many small samples are exhibited, one parcel now presented to the committee containing about 5oz., has four or five different qualities, and although handsome, has evidently been so prepared for this exhibition. It is not intended as a sample of the whole crop, its want of uniformity is an objection even if this were so. The committee respectfully recommend that at the next Fair of the Institute, a special premium be offered for the largest parcel of reeled silk, of uniform quality, of American growth, produced in the season of 1843, by one family or individual, and also, that competitors be requested to accompany each parcel or article produced for competition, with a written statement of the cost of production, and any other facts which they may wish to make known, or think may be beneficial to the Institute and country.

The specimen of raw or reeled silk which meets the approbation of the committee and is by them classed as *best* is No. 359, and consists of 1 1-2lb. in three skeins, which is a part of a parcel produced by a person who has never fed worms until this season, who was induced to use the Peanut cocoons from the recommendation of the Institute at the last Fair. This silk is well reeled, having in each skein a half a days work, reeled upon the Piedmontese reel, very even and uniform, with a round thread, well adapted to the present state of the silk manufacture in this country. The silk would be more valuable if reeled finer, but the operator would not probably have made it as uniform or as valuable with her slight experience in reeling. These facts alone speak emphatically in favor of the simplicity and feasibility of the silk business. The committee are informed by the agent of this silk that the producer, reared it at a profit and is preparing to extend the business largely next season.

The specimen of raw or reeled silk denominated as second-best by the committee, is marked No. 1221, and is a larger parcel than the last mentioned, made from the Peanut cocoons but not as well reeled; it is, however, deserving of notice. The cocoons exhibited with the same parcel, are badly selected, having among them a large number of dupions if these were reeled together, as is very probable, the cause of unevenness of this silk is apparent. To show the importance of attention to the quality of reeled silk and the advantage of care in reeling, the committee have ascertained that the price of the article in the European market varies from $2 to $6 per pound, a difference entirely owing to the care bestowed on the production.

There are several other parcels, inferior to the two above named, not deserving particular attention.

Among the practical uses to which American raw silk may be usefully applied, is one discovered by Mr. James Hanley, harp manufacturer, which obviates a great objection, (heretofore considered insurmountable,) to that delightful instrument. In the variations of temperature in our climate, the harp is subject to be instantly unstrung, much vexation is experienced by the breaking of the strings and the apparent impossibility of finding some material, which, from its great strength would resist this action. The raw ungummed American silk is that material, and harp strings are now presented, No. 1086, made from it, which are acknowledged to be a great desideratum to the possessor of the harp, and are worthy of notice.

The committee refer more particularly to the list appended hereto as expressive of their opinion of the manufactured articles of silk exhibited at the Fair, and hope that their opinions thereon will coincide with that of the Board of Managers.

All which is respectfully submitted,

John C. Henderson. }
G. M. Haywood. } *Committee.*
W. A. Woodward. }

New York, October, 1842.

Silk Machinery.—The Committee report, that the articles appear to be few in number, and the Committee have found it difficult to meet the owners or agents to obtain from them an explanation of the merits of the several machines exhibited, and from their not being in operation, it is difficult if not impossible for the Committee to give such an opinion as will aid the Managers in deciding, whether they are entitled to the approbation and rewards of the Institute. The Committee are however enabled to give an opinion of the following articles :—

A Model for Feeding Silk Worms.—This to the uninitiated would appear to possess some merit, but the Commissioners are impressed with the belief that nothing is so valuable for that purpose as simple shelves or tables constructed of boards, jack-planed and covered, if necessary, with paper. Simplicity is necessary to the success of the silk business, and the Committee advise that the Institute recommend no complex machinery for the feeding, for no plan heretofore proposed has superseded the one above named, which has for its great recommendation, that it is precisely adapted to the purpose, and costs nothing for materials, as they are worth as much after use as before; and as there is no patent for it, the whole community are free to use it.

The silk business must and will ultimately become a great and important branch of productive industry in this country, and the whole matter is as simple as rearing chickens, and requires no expensive fixtures. Feed on shelves—use proper hurdles—give them straw or branches to spin in—reel on the Piedmontese Reel, which, although in use upwards of 160 years, has not been excelled, and it has given the Italian silk a character above all others, as well as advanced the price 150 per cent. above that from Bengal. Then let us encourage American artists to produce machinery for winding, throwing, spinning and weaving, and from what American ingenuity has done, we can easily imagine what it will do. It will give us facilities to compete with the pauper labor of Europe and India, and enable us to pay our own free labor a freeman's price, and still produce our silks in large quantities for home consumption and exportation, but better in quality than those now brought from afar.

A Silk Reel, not at all adapted for practical use. The silk reeled on it, if allowed to remain on the spool, as it is compactly laid and stiffens in that manner with its own gum, will in a short period become rotten and useless, like the cocoon, which loses half its value by keeping. The silk thus reeled cannot be used until again re-wound, and must then be first wet, which is an injury to the lustre.

The Committee being practical silk culturists, are prepared to express a decided opinion in favor of the *Piedmantese Reel*, and this has in fact become an American reel by some slight improvements in the gearing, though retaining the principle, which is calculated to give the thread evenness, roundness and lustre. The skein is the proper size for exportation, and adapted to the machinery of Europe, which will hereafter be our great market for raw silk, for the Committee look upon it as one of the events certain to happen, that this country will become a great silk producing country, and it should be the object of the Institute, as it is that of the country, to encourage the adoption of the simplest kind of machinery adapted to the purpose. With these views, the Committee cannot consent to recommend American reels or other machinery, simply because they are American, and not unless they are superior or better adapted to the purpose than those now in use in other silk countries. At the same time they are well aware that American ingenuity is fully adequate to invent and produce the kind required to meet the wants of the country, as soon as our farmers will produce the raw material.

The Committee are of opinion that the great desideratum in the silk business, simplicity, cannot be attained by the adoption of such machines as combine different principles, including the reeling, throwing, and spooling process in one—as it is certain that neither can be well done, and the effect of adopting such machinery will be to prevent American silk from taking its grade of number one, among the silks of the world, to which it is entitled.

The reeler, to make the best quality of reeled silk, has constant and full employment with an assistant to turn the reel; what folly then, to expect that one person should reel, wind, twist, double, and spool the silk, and also turn the reel at the same time! The result of such an attempt is an inferior article, and the sneers at American sewing silk continue to be well founded. Now it is found that well reeled American silk, (some of which is exhibited at this Fair,) is fully equal to the best Italian, which in the English market is worth from $5 50 to $6 per pound, and would *even now* pay the producer at least 100 per cent profit for exportation. What is the difference if this silk is badly reeled? Why, it would sell in the same market for about the same price which it cost to produce it here, viz: $2 per pound! this is now the price of some of the Bengal silk in the English market.

The English have become satisfied of the cause of this difference, and are already introducing the Piedmontese reel into India.

The silk business has one great recommendation to us as Americans—it requires personal superintendence and care—it is well adapted to give employment to that portion of our population which, from the improvements in machinery, have been thrown out of employment—the silk reel will now supply the place of the spinning wheel, and give pleasing employment and support to a deserving part of the community.

The Committee are not averse to the introduction of machinery, for they are aware that with all the improvements which can be made, there will be still enough to employ all our manual labor, which has not other useful and profitable occupation: they wish, however, to encourage such as are really valuable and discourage such as are not calculated to benefit the silk grower and the country.

With these views, the Committee do not think the reel exhibited, No. 206 and No. 1285, are entitled to a premium, as not adapted to the advancement of silk manufacture or calculated for the use of silk producers, as the sewing silk produced on them, will not sell for any more or as much, when brought to market, as if simply *well reeled*, and the same manual labor applied separately to each branch of the business here attempted to be combined, will produce an article of superior quality.

The producing cocoons, and reeling silk, is properly the business of the farmer, the throwing, spinning, weaving, &c., the business of the manufacturer, and they cannot be advantageously combined any more than growing and spinning of cotton; there is enough for both to do, and both will derive larger profits from their respective employments, than they can possibly realize from uniting them together.

The Silk Doubler and Winder, No. 692, appears to be well adapted to the purposes intended, and the Committee think is deserving the notice of the Institute, although the exhibiter does not claim the merit as inventor, but as having made an improvement on the most approved machinery now in use in England, and as the first to introduce the same in this country.

S. M. McRay, } *Committee.*
W. A. Woodward, }

We fully agree with the authors of the above report, in the necessity of using *simple machinery* when reeled by the producers of the cocoons; and we willingly leave to the regular and more extensive manufacturer, his choice of plans for converting the cocoons into the finished fabric.

No. 1285.—*Silk Machine.*—This is a domestic machine of the character of the premium machine last year (Dr. White's). It is intended to obviate a defect in the twist, which in Dr. White's is not perfectly uniform without change of speed in some parts of the machine during the filling of a bobbin; but in this machine it is rendered uniform, by substituting an ordinary throstle spindle. This machine twists from the reel, and may be called an improvement upon Dr. White's; and although this improvement is nothing more than to drop a defect and substitute an old method, it is nevertheless an improvement, and in the opinion of your Committee, entitled to some merit as a good Domestic Silk Machine.

No. 692.—*Silk Machine.*—Your Committee consider this a useful machine for a manufactory in which winding, reeling, also reeling from swifts, and doubling from spools is practised. This machine has also a colleague machine accompanying it for doubling and twisting, in which are parts to note the breaking of a thread. Your Committee think well of the spool used by these machines being of tin. We recommend it as the best machine for manufactory use exhibited.

Upon the subject of Silk Machinery your Committee say, in conclusion, that they regret the absence of any thing decidedly new and important at the present Fair.

No. 19.—*Grist Mill*, of the class called Portable.—A small mill upon this plan is got up to be worked by hand, and may be termed a "Hominey Mill," for which purpose it is well adapted. We recommend it to the favor of the Premium Committee, as the best *Hominey Mill.* Another specimen upon this plan, called "Universal Mill for Grinding Grain." We pronounce it a good flour mill.

Cotton and Hay Presses.—There have been seven or eight varieties exhibited at the present Fair. Their importance is enhanced by the increased disposition to press hay for market.

No. 1204.—*Hay and Cotton Press.*—This press is an excellent one, and finest and best for a Cotton Packing Press, and deserving of particular notice. It is also a good Hay Press; but as a cheap press is the principal merit for their use, we present another as best.

No. 1136.—*Combination Power Press.*—This article has the qualities of a cheap, strong press for hay, and we pronounce it best for that use.

No. 1237.—*Lever Railway Press.*—This press is also intended for hay, and is second best.

No. 1301.—*Dynamometer for Machinery.*—This article was exhibited last year upon a smaller scale. The specimen now here is a large, well-built, and excellent article, suitable for measuring the power of the largest size engines; its use cannot fail to advance scientific mechanism. We bespeak for it particular attention.

No. 110.—*Revolving Stand Pumps.*—These pumps unite simplicity of construction with durability, convenience and economy. They are so constructed that the handle may be changed to any position; they are made of cast iron, cheap and durable—worthy of the favorable notice of the Premium Committee.

No. 989.—*Smut Machine*—This machine, for which a gold medal has heretofore been awarded, continues to be the best.

No. 25.—*Smut Machine.*—This is also a good article, performing its work well and rapidly, but in its construction more frail and less durable. In competition with No. 989, is second best. Entitled to notice as a good smut Machine.

No. 942.—*Smut and Garlic Machine.*—This machine is made upon the general plan of No. 989, with the addition of a coarse card rubber for cleaning garlic, for which purpose it appears to be well adapted, and entitled to particular notice as an improvement upon No. 989, both being the invention of the same individual.

New York State Fair Reports.

Maple Sugar *by B. Gauss, jr. of E. Bloomfield who received the highest premium of* $15. He manufactures from six to eight hundred pounds of Maple Sugar a year; and taps about three hundred trees. He boils in a sheet iron pan set upon an arch. When the sap is boiled to a syrup, it is then carried to the house, strained and settled; afterward it is put into a kettle, boiled and cleansed with milk and the white of eggs, until it will grain. It is then put into pans to drain; then put into boxes to drain. These boxes converge to a point, so that the molasses settles to the bottom. On the surface of the sugar in the boxes, flannel cloths are placed, constantly kept wet with cold water. When sufficiently drained with these cloths, the sugar is melted over again, cleansed again with milk and eggs, and the same process gone through again with the flannel cloths. These cloths are washed every day to extract all the coloring matter from the sugar.

Foreign Stock.—The Committee on Foreign Stock, would respectfully report:

They have had the pleasure of examining a grey four year old Norman Stallion, presented by Mr. Edward Harris, of Moorestown, N. Jersey, and imported by that gentleman from France. This horse belongs to the breed used for the dilligence or stage coach in France, and although not decidedly fleet, they are remarkable for their bottom and endurance. It may indeed, he well doubted whether any other variety of horses would drag those cumbrous vehicles so great a distances in a given time. Like their descendants, the Canadian horses, they are easily kept, will feed on the coarsest materials, and are remarkable for their freedom from disease, and their iron hardihood and endurance under all circumstances.

Your committee consider Mr. Harris' horse one of unusual substance and symmetry, for the breed. The shoulder lies well back, the back is short, the whole conformation betraying immense strength. He has a great length and substance of fore-arm, and the limb below the knee is clean and short, for the character of the breed. He also displayed free and spirited action. Your committee cannot but believe that in its pure state, this variety of horses would prove one of the most valuable for heavy draft; and there is little doubt that crossed with the light mares of our country, would produce a peculiarly hardy and active race of horses, fit for the road or the plow.

The society were much obliged to Henry Whitney, Esq. of New Haven, Conn., for the opportunity afforded them of seeing a few specimens of his fine Short Horn stock, his valuable imported bull "Rocket," by "Norfolk," out of "Carnation," bred by Mr. Hargrave, in England, and his red roan cow "Strawberry," an animal that attracted much attention for her substance, and general good appearance. More it would not become us to say, as she is engaged in a sweepstakes. His beautiful heifer "Cornelia," we understand to be also in a sweepstakes, and therefore feel it necessary to abstain from comment.

Your committee further had the gratification of viewing a fine specimen of the Duke of Leeds' stock, in the imported bull "His Grace," brought on the ground by Paschal Morris, Esq. of Allerton, Chester co. Pa. This animal was by "Anthony," out of "Vinea," she by Mr. Whittaker's Frederick, &c. "His Grace" is an animal of great substance, and much excellence. He was selected, as we are informed, by Mr. Whittaker, in England, and sent over to this country in 1838.

Henry S. Randall.
Francis Rotch.
George J. Pumpelly.

Jefferson County Agricultural Society.

Dairy.—"The committee on Farms and Dairies visited every town in the county, with the exception of Philadelphia. The committee examined forty-three farms, twenty-seven cheese, and ten butter dairies, and traveled more than three hundred miles. In the cheese dairies 829 cows were milked, and when examined, (from the 15th of August to the 1st of September,) they had made 197,734 lbs.; calculating the season to be three-fourths gone, they would make in all 263,545 lbs., which would be 318 lbs. to each cow. This, at 5 1-2 cents per pound, would amount to $17,49 per cow, and the butter made in the fall and spring from each of the same cows must amount to five or six dollars more. In the ten butter dairies 185 cows were milked, and they had made 15,020 lbs. Taking the aggregate of all the cheese dairies up to August 15th, each cow had averaged per day two pounds two and a half ounces of cheese; and the butter dairies, thirteen and a half ounces per day. Calculating cheese at five and a half cents, and butter at twelve and a half cents per pound, there would be a difference in favor of making cheese of about one and three-eighths cents per day, or one dollar and sixty-nine cents for four months. It was uniformly the case that the greatest quantity of butter was made from each cow, where the quality was the poorest. This goes to confirm the better opinion which already exists, that by letting milk stand until it becomes *loppered* the quantity of cream increases, while the quality deteriorates."

Washington Co. Agricultural Fair.

We are quite obliged to Dr. Asa Fitch, for sending his detailed and interesting account of the Washington Co. Fair, held at Salem, Oct. 11, 1842. We notice with pleasure, the large number of improved and native cattle and horses there exhibited; and the reports on the large crops of corn and oats, and profitable crops of winter and spring wheat. Of the latter, Washington Co. in former years, raised large quantities, but for a long time, the ravages of the Fly have been so destructive, as to have caused an almost entire suspension of its cultivation. In an excursion we made there the last season, we were told, that recent attempts had been more successful, which we trust, the later improvements of agriculture will enable them to realise fully.

Of Corn, 85, 80½ and 67½ bushels per acre were raised; Oats, 97 1-8 and 80 3-16 bushels per acre: and Potatoes 500 3-4 bushels per acre.

Domestic Manufactures, including *Silk*, make up a large item in the Fair. We must bring the ladies to our aid, if we expect the last can be properly developed; or indeed, if we rely on giving the full interest and effect to the annual exhibitions of our *home productions;* which, without their presence and co-operation, we cannot hope to inspire.

The Fine Wool Sheep were exhibited there in great perfection.

We should like to see a specimen of the *perfect Dynamometer*, constructed by the Chairman of the Committee on Implements, John Williams, Jr. of Salem.

ORIGINAL CORRESPONDENCE.

Agricultural Fairs for 1842.

From several of our attentive correspondents, we have received various notices of Fairs, some of which come in a printed form. We subjoin such extracts as our room will furnish.

For the American Agriculturist.

Berkshire Cattle Show and Fair.

Gent.—Having some business at Lanesborough last week, I made "one stone kill two birds," by transacting my business and attending the late Berkshire Cattle Show and Fair, held at Pittsfield on the 5th and 6th inst., being the 32d anniversary of this Pioneer Society.

The concourse of spectators, if not larger than heretofore, appeared much more respectable than I have noticed on any former occasion.

It was gratifying to witness the prompt and business-like manner in which the officers and committees attended to their respective duties, and it would be of infinite service to the members of our State Agricultural Society to attend their meetings, and learn a lesson in the management. It is a truth, which every attentive observer will readily admit, that the arrangements are properly made and punctually carried out. And why should they not? Many of them have been members ever since the first organization, and most of them have grown up with the Society, and are as familiar with its details as they are with the details of their farms.

The show of animals, particularly working oxen and steers, exceeded any former exhibition which I have ever attended; there being one hundred and ten yoke on the ground of well-matched and well-trained cattle, mostly red, and in high working condition; yea, some of them more fit for the butcher than some I have seen slaughtered for beef in Albany. It was aptly said, in the report, that "there were but few among them that did not carry marked proofs that they came from a land of peace and of plenty, and were strangers to Pharaoh's lean kine." It was a most gratifying display.

The exhibition of cows and heifers surpassed any former show. They were in fine condition, and showed evident improvement both in size and form. I must, however, with all due deference, beg leave to differ in opinion with the Committee in awarding the premiums on cows. I saw none on the ground which I considered superior, if equal, to those exhibited by J. Clapp, Esq. His stock of cows, heifers, and calves, taken as a whole, were, in my humble opinion, decidedly the best on the ground, and one or two of his animals richly deserved the first premiums. His bull calf was a remarkably large and fat animal of his age; but too coarse in the head, neck, and legs, to breed from. His heifer calf was a little beauty.

The show of bulls was not only deficient in numbers, but in quality; only one worthy of notice, and to him the first premium was very justly awarded. If a little more attention was paid to the quality, symmetry, and style of their bulls, a great improvement would soon be apparent.

The swine, though not very numerous, were generally very good; and two of them would answer well to the portraits in a late London Farmer's Magazine, of the "Improved Essed Hogs," which took the first premium at the fair of the Royal Agricultural Society of England.

The sheep I did not examine, but understood they were very fair specimens.

The specimens of *home industry*, exhibited in the Town Hall, arranged as usual, with good taste, by Messers. Beebe and Colt, consisting of the handiwork of the ever-industrious daughters of Berkshire, bore evident marks of improvement. The specimens of cloth were unusually large, and of superior quality. A pair of white woolen blankets, made and exhibited by Mrs. Chapman of Pittsfield, exceeded any thing of the kind I ever beheld. The Empress of Russia might feel proud to possess them. A piece of flannel, made and exhibited by Mrs. Worden of Richmond, was much admired for its softness and even texture by all who examined it; so was also a beautiful piece of linen diaper, made by Mrs. Churchill of Pittsfield. The specimens of embroidery, presented by Mrs. Root and others, could hardly be excelled, and added much to the display, and furnished evidence that the females "whose home is among the hills and vallies," know what constitutes the elegancies as well as the substantials of life. In short, take it altogether, this exhibition of truly *domestic* manufactures would, I think, satisfy the most incredulous that we have the *ability* of rendering ourselves independent of foreign industry.

The number of competitors for the premium on butter was greater than at any former exhibition, which was accounted for by the reducing the quantity required from 100 to 50 lbs. There were thirteen lots offered, all of which were of superfine quality and put up in good order, and reflect great credit on the makers. There were only three lots of 100 lbs. each of cheese offered, but they were of rare quality.

The Fair of the "Young Ladies' Benevolent Society," in the evening was well attended and the room tastefully decorated with evergreens, which beautifully contrasted with white dresses and smiling faces. The tables were well filled and beautifully arranged—some with fancy and some with *taste*-y articles, too tempting to look at merely. And then, the way in which the keen eyes of the ladies who stood behind them, as saleswomen, moved about the room in search of customers, was a caution to those who had the wherewith about them. The cakes were excellent, and the ice-cream delicious. Sales, however, not as brisk and animated as heretofore, but full equal to the expectations of its friends. This closed the proceedings of the first day.

The morning of the second day opened with a brilliant sun, a clear blue sky, with scarcely a cloud to be seen, and at an early hour the sacred stillness which pervaded nature was broken by the busy hum of preparation for the most exciting and interesting part of the exercises—the Plowing Match, which was to take place at 8 o'clock. The field selected for the contest of the plowmen was situated about two miles southeast of the village, in the beautiful valley of the silent Housatonic, whose surrounding scenery of hills and dales were decked in Autumn's charming and varied foliage.

When I arrived on the ground, I found it surrounded on all sides by multitudes of both sexes, in anxious expectation of the coming contest. The field was laid off in lands of one-fourth of an acre each, and the time allotted for plowing that portion was one hour, with a rest of five minutes. There were 21 teams entered for competition, 13 horses and 8 of oxen. The longest time consumed by any plowman was 59 minutes—the shortest 35 minutes. Each plowman drove his own team and performed his own work in a manner which reflects great credit on our improved husbandry, and with that skill for which the plowmen of Berkshire are so famed.

It was with no small degree of pleasure, I found a large number of the improved plows of Messrs. Ruggles, Nourse & Mason's manufacture. All the premiums were awarded to the plowmen using these plows.

At 11 o'clock the procession was formed under the direction of the Marshal, and moved to the church, preceded by the excellent Berkshire band of music. The annual address was pronounced by R. F. Barnard, Esq. of Sheffield, the President of the Society, and was listened to with great attention by a large and very respectable audience. It was replete with sound sense, and confined, as all addresses of this kind should be, mostly to practical suggestions, and treated with great force and elegance.

After the Address of the President, the Reports of the several Committees were read by the Secretary, and the premiums, *in plate*, were delivered by the Treasurer, to the successful competitors.

After partaking an excellent dinner with the members of the Society, prepared by Messrs. Warriner & Cooley, of the Berkshire Hotel, I took my seat in the cars for Albany, well pleased with the success of "Berkshire's festal days." C. N. Bement.

Mr. B. V. French, of Mass., says the first Agricultural Society in the United States was formed at Philadelphia during the last century. Will Dr. Jas. Mease, of that city, who we believe was the secretary, give us the particulars of its formation, date, &c. ?

We are promised some interesting particulars of the old New Haven Ag. Soc., organised by the late Col. Humphreys, Eli Whitney, and others, about the year 1810, from a gentleman now a resident of that city. The rival claims for the *birth-place* of these popular meetings, in the U. States, should at once be settled in favor of the rightful claimant, or after generations will assign them a more diversified origin, than was claimed by the seven cities of Greece, for the honor of giving Homer to the world.

Fair of the Hampshire, Hampden, and Franklin Agricultural Soc. of Mass., held at Northampton 12th and 13th Oct., 1842.

The Reports of the Committees of this Society are full of interest and instruction. The first, on Manufactures, states, that " the collection this year, in number and value, exceeds that of either of the three or four preceding years; and they hail this as a sign of renewed interest in this important branch of production, on the part of the people of the Connecticut River valley. The Committee regard the increased display of domestic manufactures which this year greets us, as a cheering indication that the baneful spirit of speculation is giving way to a more sober and more useful temper. For some years, too, these all-important branches of industry have not received that fostering care from the government which had previously been extended to them, and this may have been one cause of the decay of interest in them. When any branch of industry ceases to be profitable, it will cease to be followed. But if the signs of the times do not mislead us, the care and aid of the government, so much needed by our domestic manufactures, yet in their infancy, and so essential to develope the full resources of our country, will not hereafter be withheld; and we anticipate a constant and steady increase of the prosperity of these branches of industry."

Among the articles enumerated were the Fancy wove cloths from the Northampton Woolen Manufacturing Co., home-made Beavers, blue Domestics, satinets, rose blankets, flannels, carpets, hearth-rugs, counterpanes, linen diapers, gloves, mittens, hose, and all the paraphernalia that make our Yankee houses and their industrious and intelligent inmates so tidy and comfortable, without the necessity of going across the ocean to purchase from foreign labor what they can better supply at home.

" Of silk the supply was not so great as might perhaps have been expected. Only two entries of sewing silk were made; and though there were five entries of raw silk, the Committee found but three specimens.

" No. 2, (by Northampton Association) of sewing silk was a superior article—the colors brilliant, and the silk every way well made.

" No. 1, (by Mrs. Martin B. Graves) was apparently made by hand, and commendable for the industry exhibited.

" The raw silk was all good. No. 2, (by Northampton Association) was particularly noticed as a beautiful article. No. 4, (by Dr. Bardwell of Whately) too, was excellent silk.

" Your Committee cannot but hope that the day is not far distant when attention will be more generally turned to this branch of production. The bursting of the mulberry speculation was of course calculated to check for the time the silk culture. But that has passed by, and though certainly a salutary lesson against plunging into wild enterprises, there can be no reason why it should longer operate to check the development of the real wealth and resources of the country. And the fostering care which Government appears now willing to extend over this, as over other species of industry, must, as your Committee hope, warm it into vigorous activity.

" The history of the silk culture in France is full of instruction, and full of promise, for us. The first efforts which were made to establish the culture there, completely failed. The fabric first produced was rude of course—no one understanding the mode of operating, and the better made and cheaper silks of the East coming into the French market, and competing on equal terms with the home article, drove it out of the field, and ruined all who had embarked in the enterprise. But after one or two attempts had thus been made ineffectually, the Powers of the time saw the importance of encouraging and fostering this branch of production. The Government extended over it the shield of protection, and it almost immediately sprung into new activity and vigorous life. In a few years the home market was supplied by the home-made article; and now France sends her silks on the wings of the wind to almost every quarter of the globe. We purchase of her yearly to the amount of millions.

" But there is, the Committee believe, no reason why we should be dependent upon France for our supply of silks. In parts of our country the soil is well adapted to the mulberry, and the climate agrees well with the silk worm. What possible reason can be assigned why we should not raise and manufacture this article to the extent at least of our own consumption? France has an advantage, some one may say, if not in her soil and climate, yet in the price of labor there. But when we consider that much or most of the labor could be performed by old persons, by women and children, this objection loses all its force.

" The excellencies of Wilson's newly invented patent Lock, which bids defiance to skeleton keys and all the contrivances of the pick-lock and the burglar, we have not space to detail. But we should be doing an act of injustice, if we let it pass without paying a tribute to the excellence of the lock and the ingenuity of the inventor.

" We should by no means do our duty, if we closed our report without noticing the display of tasteful and beautiful articles of domestic industry—of *domestic* industry in the strictest sense of that term—which adorned the upper part of the Hall—the offering, for the most part of fair hands here in Northampton, to benevolent and charitable purposes. The execution of these beautiful articles, some of them exceedingly beautiful, does as much credit to the taste, skill, and industry, as their object does to the kindness and good will of the makers. Considering the brief time which the ladies have had for preparation, their success is deserving of the highest praise.

" As a whole, the Committee repeat, that they are much gratified with the Show which has this year been offered of articles of Domestic Manufacture. They cannot but regard the increase in their number and value, as an indication of a return of interest in, and prosperity for, these exceedingly important branches of production. We trust that this interest and prosperity will go on increasing, till the hopes of the most sanguine in regard to them have been fulfilled. The increase of domestic manufactures must have a most important and beneficial influence on the general prosperity of the country. For the *Committee*.

" DANIEL WELLS ALVORD."

The Report on Stock is spirited, practical, and sensible:—

"The Committee have shared largely in the regrets of the members of the Society at the indifference which, for a few of the last years, has thrown its paralyzing influence over their operations. Notwithstanding the unwearied efforts of a few staunch friends, the cause waned, and year after year presaged a near approaching nadir.

"It is with feelings of a very different kind that the Committee are now enabled to meet the friends of Agriculture in the counties of Old Hampshire. The present anniversary bears unequivocal testimony to the fact that a new energy is aroused, and that the sons of the founders of this institution have determined to perpetuate and increase the benefits of a Society upon which their fathers spent so much labor. The increase of animals and household manufactures presented for exhibition, and of the assemblage of farmers on this occasion, encourage us to hope that a new day has dawned upon us. Such meetings are needful to every farmer. How can they, as a body, learn the benefits of a particular method of culture over others, but by coming together and interchanging their views and recounting their mutuul experience on the subject? How judge of the best animals for stock, but by bringing them together and comparing one with another, selecting the forms best adapted to our soil and use, and breeding from them? There is more in such a meeting than the mere excitement of the occasion. The plans and method of the successful cultivator are carefully studied and imitated. The causes of failure in others are as carefully sought out and avoided. On our best cultivated farms a rotation of crops has been introduced, and this has mainly been done by the conversational meetings of the Society, together with the circulation of Agricultural reports and newspapers. To a great extent, the worst forms of our native stocks of cattle, sheep, and swine, have been driven out, and fine crossings or full bloods of the best foreign animals introduced in their stead. This change must be attributed to our annual fair. All knowledge relating to the theory and practice of agriculture should be a joint stock concern—a full fountain, into which every farmer may introduce a pent stock, and draw out as his wants and inclination require.

"In number, our farmers exceed all other classes of the community. They wield the destinies of our state and nation; they are the great producers, all other classes being dependent upon them for most of the necessaries and comforts of life. *The farmer, then, should be a reading, thinking, working man.* He will take rank among his fellows, according to the measure of knowledge and skill which he exercises in his vocation and among others according to his general information and virtuous conduct. Nearly all our professional men and mechanics come from the farmer's fireside, while the sons of the professional men and mechanics are ever sighing for 'the good old days of Adam and Eve.' These changes will bind us all as a brotherhood together, and ever operate as a check upon a spirit of exclusiveness which might otherwise spring up between the several classes. The farmer has a deep interest in our common schools, our academies and seminaries of learning,—in the institutions of religion and benevolence,—in the libraries, book-clubs, and Lyceums. He should set the standard of intellect and of virtue high, and encourage all to come up to its full measure.

"The Committee cannot close their report without recommending to the Society the immediate adoption of measures for the increase of members and usefulness of the Society, and we consider the present as an auspicious season for such a work.

"For the Committee,

"Samuel Wells, Chairman."

The Reports on *Horses* and the *Plowing Match* are good, but we have not room for them.

Fair of the Hartford Co. Agr. Soc., held at Hartford, Conn., Oct 8, 1842.

The Report of the Committee on *Farms* is peculiarly full, minute, and instructive. They carefully examined *nine* different farms, and from testimony collected on the spot, have made out the exact profit on each, after deducting all the costs of production, seed, &c. The result is, that three farms pay an interest of 12 per cent. on the capital; another, 12 5-16 per cent.; another, 13 3-4; another, 10 1-2; another, 13 3-8; another, 11 1-2; and the lowest, 10 per cent. What other business, as secure, has paid an average profit approximating to this? And when will intelligent farmers learn that their profession is not only the most ancient and honorable, but, on the whole, the most profitable pursuit of life; and that, instead of educating their sons for the professions, and the various trafficking operations of life, which are already overflowing, they would consult reputation, honesty, health, comfort, and wealth, by thoroughly fitting them for the duties of the farm?

The Report on Reclaimed Lands.—A novel, but very interesting report, which we trust may hereafter be imitated, we subjoin at length.

"The first piece belonging to Mr. Samuel Deming, of Farmington, is situated between the two ridges of mountain, east of the village; containing about 3 acres. When he came in possession of it about four years since, it was a bog pasture, producing little but coarse sedge grass, and low brakes. He commenced his improvement by cutting the bogs and putting them in stacks; the following winter they were hauled to his barn-yard and hog-pen; afterwards, when mixed with manuure, put on to a light plain soil, to great advantage. The next year he sowed it with herds grass and clover, manured a part of the piece with barn-yard manure, which produced a large burden of good quality, while that not manured produced little, and that of little value; the next season he manured the remainder with like success; the past summer, although uncommonly wet, it produced a good burden of a good quality of hay. The expense of cutting and stacking the bogs, Mr. Deming estimates at $2 25 per acre, and that the benefit he received from them on his plain lot, would compensate him for removing them.

"The next piece we examined is situated on the south road leading from Hartford, about two miles east of the village of Farmington, owned by Ira Bowen, containing about 6 acres in all; about two acres mowed this season, one acre sowed with buckwheat, the remainder now in progress of improvement. Before he commenced his improvements, he considered it of little or no value, an evidence of which is now to be seen; the former proprietor having some years since, hauled, in the winter season, when the swamp was frozen, some hundreds of loads of stone from the adjacent upland into this swamp, to get them out of the way, where they are now to be seen, surrounded by handsome mowing. From this lot Mr. Bowen estimated he cut over two tons of herds grass to the acre, the past summer, at one cutting, without the aid of any manure. He has bestowed much labor to get this land in its present state, in ditching, digging out the stumps and roots, cutting the bogs and burning them; but the actual expense he is not able to give, as the most of it has been done by himself and his usual hired help, when his other farming operations would permit; he thinks it would not exceed $15 per acre, and the land that is in grass to be worth from $100 to $150 per acre.

"The third piece examined by your committee is situated about one mile south of the meeting-house in East Hartford, between the road and the Connecticut River owned by Mr. Horace Williams, containing between one and two acres; is a swail of wet cold upland, filled with bunches of rushes or round grass. Mr. Williams, by draining, has been able to plow it, and got a fine crop of corn on it; this piece is well situated for under draining, a mode in our opinion, if our farmers would practice more, they would find great benefit from.

"The last piece examined is situated in the south-east part of East Hartford; is owned by Mr. Ira A. Kimball, containing between 1 and 2 acres; your committee would here remark that they have been particular in describing the situation of the different pieces viewed, hoping that our brother farmers will examine them, and follow the example set them. This piece was a low miry swamp, covered with moss; but by surrounding it with a ditch, he has drained and plowed it two years; the last year, he put on buckwheat; this year, corn and potatoes; and by way of experiment, a patch of carrots and tobacco: his crop looked well, and the cleanest from weeds of any seen by the committee this season; when Mr. K. commenced on this piece, his neighbours rather ridiculed him for attempting to do anything with it; and tauntingly asked him to engage to them buckwheat for seed; but he seems to be a man of too much resolution to be discouraged by such means. The expense of reclaiming it, he considers but little, as he performed the labor himself, with the aid of a boy 12 or 14 years old—except the plowing, which he was compelled to hire, as he had no team, except a single horse, with which he hauled the muck that came out of the ditches, into his barn-yard and hog-pen, afterwards putting it on his light sandy soil, to great advantage.

"In conclusion, your committee would remark that if what was long since said by a writer on Agriculture, be true, that "He who makes two stalks of grass grow where but one grew before, deserves more of his country than he who subdues kingdoms," then he who makes acres of luxuriant grass grow where none grew before, deserves more encouragement from this Society, than the offer of a single premium of $10, and believing as they do that there are hundreds of acres in this county that now are of little or no value except for muskrats and bull-frogs to gambol in, that might be made as profitable as any land the farmer owns, they would respectfully recommend that the Society in future offer three different premiums on Reclaimed Land; and likewise increase the number of the committee, as they think that any farmer would be compensated for his time spent in performing this duty, by stimulating him to go and do likewise."

The Report on *Domestic Manufactures* is full and gratifying, and nowhere in the United States do they exist in greater variety and perfection than in this county. *Two additional Reports on Working and Fat Cattle, and Agricultural Products, and the Dairy, with the awards,* complete these instructive proceedings.

New-Haven County Annual Fair.

This veteran society, first organized in 1810, by some of the choicest spirits of the age, Col. Humphreys, Eli Whitney, Hon. James Hillhouse, President Dwight, and others, was held in New-Haven, on the 28th and 29th Sept. last, and in a style that would have gratified its illustrious founders, had they been present. *Ten thousand* were supposed to have witnessed it. The working oxen were estimated by acres, as near as we can judge. They came into the city by detachments of 20 to 132 yoke each, and when arranged in a hollow square, (for the city was not long enough to hold them in a straight line,) they formed a coil which, had it been unwound, would have extended one mile and three fourths. *One thousand and twenty-six working oxen*, each of superior form and appearance, "of a deep, glossy, red color, and in fine working order," attest what care and attention can do, with materials already in our hands, when properly directed. The Farmer's Gazette says :—

"In addition to the working oxen, there were about 100 head of other stock, of foreign and domestic blood; with horses, sheep, and swine, which occupied two rows of stalls extending through the avenue formed by Temple-street, on the west side of the parallelogram. This part of the exhibition was not equal in improved blood to what it was last year; and some of the best stock in the county was absent at the New-York Cattle Show, at Albany. There was a trial of strength by a number of teams on the Green, which excited a deep interest in the spectators. The load and cart weighed 5,400 lbs., nearly two tons and three fourths, which was drawn without any apparent extra effort, by several single pairs, on ascending ground.

"Take it altogether, it was doubtless the most imposing spectacle of the kind ever witnessed in the State.

"The Plowing Match, on Thursday, was attended by three thousand people, as estimated by good judges present. Though the number of competitors which entered the field was not large, the interest excited was intense. The field was a square of about 20 rods, on which the plowing was performed. The ground was marked out into lands of one-eighth of an acre each, and was accomplished by one team, of one yoke, in 26 minutes, by another in 27 1-2, and the longest was only 32 1-2 minutes. Such was the zeal excited by the strife, activity, and skill of the plowmen and their teams, that, at the close, a general shout of approbation was sent up by the multitude, which made the welkin ring again.

"The exhibition of Agricultural and Horticultural productions, in the State House, was a magnificent and sumptuous display of flowers, fruits, vegetables, and grains, arranged in elegant order. The great entrance Hall, by the generous aid of the fair sex, ever prominent in a good cause, was tastefully dressed with flowers, evergreens, statuary and paintings, and lighted in the evening with numerous lamps, which, with the sweet harmony of Mr. Metz's band of music, formed altogether quite a Fairy scene.

"The six spacious rooms on each side of the Hall, were occupied with rows of tables around three sides of them, which were covered with a great variety of fruit and vegetables of superior kinds. The large City Hall in the basement was filled with vegetables, grains, agricultural implements, and products of the dairy.

"The wonderful improvement in Horticultural skill and science, which this anniversary has evinced, speaks much in favor of such exhibitions, and those who have sustained them. The house was thronged to overflowing during the hours of exhibition."

With this we must close our notice of agricultural fairs for our present number. Long may the worthy farmers of our happy country, enjoy such peaceful triumphs of their labors, and long continued to them be the annual return of these gala days, refreshing their virtuous minds, and re-invigorating their hardy frames, with the healthful and innocent excitement of their God-chosen and God-blessed occupations!

Rearing Grapes and Strawberries.

The following highly interesting letter from Mr. Longworth should be carefully read by every one engaged in rearing grapes and strawberries. Mr. L. has introduced and carefully improved, some valuable kinds of the native grapes, and being not only an extensive and practical cultivator, but also a close and intelligent observer of the character and habits of the delicious fruit upon which he treats, his statements are to be taken with entire confidence.

He will please accept our thanks for this letter. We shall be pleased to hear frequently of the result of his observations and experiments on these and similar subjects from his own pen.

For the American Agriculturist.

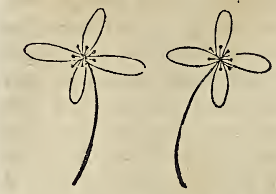
Cincinnati, September 30*th*, 1842.

Gent.—The vintage is over, and the expectations we formed in the spring have not been realized, from the rot among our grapes. The season has been cold and wet, and I did not anticipate a rich must; but in this respect have been agreeably disappointed. The juice is as rich as at any preceding vintage. I have thirteen vineyards and more under way. The greatest yield in the county is at the vineyard managed by Mr. Mottier, who is well known as an intelligent, enterprising vine dresser. He made within a fraction of 1500 gallons. A part of the vineyard that did not suffer by rot, yielded 600 gallons to the acre. The next vineyard in its yield, is under the charge of Mr. Myers, an intelligent German, of much experience in the cultivation of the vine, and its manufacture into wine. There were some vineyards in the county that produced a more abundant crop, on the same quality of ground, than even Mottier's. Mr. Hackinger had the finest crop I have ever seen. The crop of Mr. Reser, was also very abundant. I have been informed that several other vineyards in our county, were but little injured. The vine culture is yearly increasing with us, and the day is not distant, when the Ohio hills between the two Miamies, will rival the same extent on the Rhine. For this, we shall be chiefly indebted to our German emigrants; and they are gratified in stating that we can rival the wines of their own country. The Catawba is destined to make a dry wine, equal to Hock, and one of my German tenants, Mr. Lock, has made a sparkling wine from it, equal to the best Champaign. But we must not expect to succeed at first. The process of fermentation and manufacture of wine, requires both experience and skill, and we shall not for years equal the wine coopers of Europe in its manufacture. The dry Hock wines require but little experience and skill, but this is not true in respect to many of their finest wines. I propose this fall to send samples of my wines to the Horticultural Societies of our principal cities, in the hope that it may tend to increase the culture of the grape.

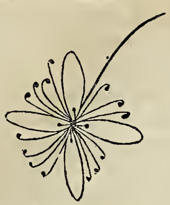
You might benefit some of your readers by drawing their attention to the proper cultivation of the Strawberry. In a late number of Hovey's Magazine, I discover that Mr. Allen, of Winchester, Virginia, takes exceptions to a remark of mine, that I have never met with an English gardener who understood the cultivation of the strawberry, though his own declarations in the next sentence, prove the truth of my observation, from his own want of information on the subject. I wrote to the Horticultural Society of London, on this subject, and drew their attention to it, about four years since, and discover that some of their late publications sustain my views. I do not state what I merely *believe*, but what I *know*, after twenty-five years' experience, that it is in vain to attempt the cultivation of the largest and finest varieties of strawberries, without regarding the sexes of the plants. In the Hudson, which is admitted to be the most valuable of all strawberries, it amounts to a complete separation of the sexes, and one acre of either alone, would not perfect a single fruit.

Hovey's Seedling, without male plants, is so defective in the male organs, as not to produce by itself, a perfect full-sized fruit. In the white and in the monthly varieties, the male and female organs are perfect in the same blossom; but when this is the case, the fruit is never of the largest size. Wilmot's superb, and some other large varieties, are perfect in the male organs, and so far perfect in the female organs, as to produce some large and perfect fruit, with many small deformed ones. The female of the Virginia Scarlet, will not, by itself, produce fruit—its male will produce about half a crop, of small fruit. Mr. Allen appears to deem that my plan might answer, when the object is to raise a few strawberries only, (as he presumes we do in the west,) but would not do at the east, where the object is to raise 25 or 30 bushels. My tenants pay but little attention to the strawberry, and merely cultivate some between their grape vines, in parts of the vineyard, but one of them sells yearly, more than four times the quantity named by Mr. Allen. But we have some individuals that I presume may compete with any Horticulturists about Winchester. Mr. Culbertson sold from his own ground, in our market last summer, some days 100 bushels of strawberries, principally the Hudson, and he was enabled to do this by his knowledge of the male and female plants, and his attention to the subject. I am truly surprised that Mr. Allen, or any other horticulturist, should doubt the principle, for it is not a new theory originating with me, but learnt from an ignorant German female market gardener, who for thirty years, both at Philadelphia and in our own vicinity, had been celebrated for raising five times as many strawberries as her neighbors, from the same quantity of ground, and of much larger size.

On investigating the subject, I was surprised to find that Duchesne, Ehrhart, and Duhamel, and all Botanical writers on the strawberry, since the days of Linnæus, fully sustained the theory and practice of the old woman, though I could not find a botanist among my acquaintance aware of the fact. For years I could not from one-eighth of an acre raise enough of the Hudson Strawberry for my own family. I can now do it from one-tenth part of the ground. There is one variety of strawberry, and one only, that I am acquainted with, that produces large fruit, that is perfect in both the male and female organs. It is of the Pine Apple family, and came from the garden of Lafayette. There are but few who would admire the fruit. I send a sketch of the male and female blossom of the Hudson, which will equally apply to other varieties, though the same difference in the size of the blossom does not exist in all species or varieties. The most careless observer will at once discover the difference when the plants are in blossom. About one male plant will be required for ten of the female, and there will be a saving to have such males as will produce some fruit. I have a new variety from the prairies of Iowa, perfect in the male organs, and so far perfect in the female, as to produce a fair crop of very large fruit. I shall send some to Mr. Buist of Philadelphia, Mr. Thorburn of New York, and Mr. Hovey, of Boston, and shall with pleasure send plants to any person who would wish to procure them, if they have friends here who will call for and forward them.



Female Hudson.



Male Hudson.

The male organs are always attached to the hull, and the female to the stem. By separating the hull from the stem of the female, the male organs will be discovered, though not before perceptible; whilst in the male, they may be seen at the distance of twenty feet. I would recommend all persons wanting faith, to refer to Rees's Encyclopædia; article, Fragraria.

Since writing the above, M. Mottier has made brandy from the mash (pomace) of the Catawba and Schuylkill Muscadell. At my suggestion, each kind was kept separate. The brandy from both promises to be of fine quality, but that from the Catawba, I doubt not, will rival the best brandy of France.

With regard, yours,
N. Longworth.

The writer of the following article was, for many years, a practical farmer in England, and has since, been more particularly engaged as a practical chemist. He has constantly, however, been an observer of Nature's operations, which he has been the more successful in detecting, as many of the manipulations of the chemist, are only acted over on a larger and more varied and complicated scale, in the out-door laboratory of the universe. His remarks are of a thoroughly practical, and therefore of the most useful character. We are promised a continuation of them, till most of the sources of fertilization afforded in our city are indicated to the farmer. We think it is unnecessary to mention, that although these observations have particular reference to this and all large cities, yet its principles are applicable wherever the materials mentioned are found.

For the American Agriculturist.

To our Farmers who obtain manure from the City of New York.

It is a long time, at least forty years, since I was practically engaged in farming, yet I retain a strong predilection for that interest, and shall at all times be ready to render it any assistance in my power. Your pursuit, my friends, is superior to all others; it is the very foundation of national prosperity, and would be supported in preference to any other interest in our country, were our legislature willing to appreciate your intrinsic value. The present is considered by us, as superior to more ancient ages, yet among the ancients, kings and princes devoted their attention to agriculture, promoting that interest as superior to all others. The modern kings, emperors, and legislators of Europe, are now pursuing the same course, and it is only our Republican America that hangs back in refusing a small pittance for establishing colleges for your instruction. This will be considered a foul blot on our national escutcheon, if not soon removed.

I observe that our farmers, in taking manure from our city, collect only the street dirt and stable manure. My view in writing this article is, to point out to them other more valuable fertilizers, now totally neglected by them, which I shall mention separately, and comment on each as I proceed.

All the fertilizing properties in manure, are the soluble portions, and by far the best of our street dirt is carried into our rivers by every rain that falls. In preparing soil for land, two distinct objects are to be kept in view; first, that the most fertilising materials be collected; and second, that a sufficient quantity of materials be added to absorb and retain the fertilizing portions. I shall call the first the food of the plants, and the second the cellar in which it is preserved, to be used as wanted. In drawing your attention to the fertilizers now thrown away in our city, I shall endeavor to recommend the best retainers to be used, after explaining the elementary properties of each material. In doing this, I shall avoid, as much as possible, all technical terms, using in every possible instance, the plain farmer's language.

I shall begin by drawing your attention to the offal of our fish markets. This is now thrown into our rivers and lost. You are all aware of the value of fish manure, and yet this large supply is daily wasted. I have conversed with our fishermen on the subject, and they all assure me, they would be glad to have it taken away, if it could be done daily. I have no doubt that tons of this offal could be daily collected. As our fish markets are all on the borders of our rivers, it would be easy to collect it if suitable arrangements were made by the collector.

The next object for the farmer to attend to after collecting this offal, is to save and apply it in the most effective manner. Our farmers generally strew fish on the land, and work them into the soil in the best manner they can. In following this mode of application, they lose nine-tenths of the fertilizing qualities of the fish; as all the ammonia formed by their decomposition, excepting the small portion absorbed by the roots of the crop then on the ground, will evaporate and be lost, at least to that farmer. I say to that farmer, because it is more than probable that it will be brought down again by rain or snow on the land of some of his neighbors. I presume, however, that those who use fish for manure on Long Island or the Jersey shore, do not wish nine tenths of its fertilizing quality to fall on farms in Canada or Florida, or the Atlantic ocean, or wheresoever the wind may direct it. I have been informed that some of our farmers have put fish in their barn-yard manure, and did not find it more beneficial to their land than when the fish were applied to it as before described. This is no more than any chemist would expect, as there is nothing in their usual manure heaps to retain the ammonia—so far from it, the most valuable portion of their manure also evaporates, for want of ingredients being added to them capable of absorbing and retaining the ammonia. The best known materials for this purpose, are Charcoal, Plaster of Paris, and the Acids. There are but few farms that do not afford brush-wood in sufficient quantity to burn into charcoal for the use of their manure heaps, by which all the ammonia from their cattle, horses, and other stock, would be saved, as well as that from fish or any other animal matter added to their dung-heaps. I would recommend our farmers to put plenty of it into their hog-pens. Those farmers who cannot have access to charcoal may use plaster, as this also will retain a large quantity of ammonia, but is every way inferior in its power of retention to charcoal. Besides, charcoal is one of the most durable of all applications to land, its good effect having been experienced twenty years after a liberal supply has been put on. It appears not to waste when used as a soil, and if it does, it is so slowly as not to be perceptible. So long as it retains its qualities of charcoal, so long will it retain its power of absorbing ammonia, and giving it up to the plant when required. A charcoal dealer offered to supply me with the dust at two shillings per barrel if I found him the barrels; but I had just engaged two sloop-loads for carting away. A friend living at Williamsburgh, has lately bought a large quantity at the above price.

The next articles I shall call your attention to as valuable fertilizers, are the broken brick, and lime rubbish, of buildings pulled down in New-York and Brooklyn. This, heretofore, has been carted away to fill up docks and low grounds, but I hope soon to see it applied to the land. We send to Nova Scotia for plaster, freight it from thence, cart it to plaster mills, and grind it fine for agricultural application; yet the bricks and mortar, possessing far greater fertilizing powers, are thrown away. Let some of our plaster grinders collect these materials, grind them coarsely, and sell to the farmers, and I predict that in a few years it will be more sought after than plaster.

I was told by a farmer I met at the Albany fair, who came from near Boston, that he owned four acres of land, which more than forty years ago was covered with brick-kilns; that this land had been in possession of his family ever since, that they had taken off great crops of natural grass every year, without adding any manure or soil, and that this year he had cut from it two and a half tons of hay per acre at one mowing. These observations were elicited by my having recommended burnt brick as manure, in the Cultivator, some months before.

Bricks contain roasted alumina, and silicate of potash. The first produces one of the best of soils, and the second forms a portion of all grass, straw, grain and corn. Wheat contains more of it than any other grain.

A Chinese farmer will scrape the plaster off rooms, and re-plaster them at his own expense, for the sake of applying the old plaster to his land; yet in our highly intelligent country, we permit hundreds of tons annually to be thrown away rather than take the trouble to collect it. Old plaster contains more or less of nitrate of lime, which is a most valuable manure.

On the 11th of the present month I noticed a carman carting away a large heap of plaster, and he told me it was used to fill up a dock. Thinks I to myself, they might as well fill that dock up with hay, as to fill it with a material that will produce more than its own bulk of hay *annually*.

Wm. Partridge.

N. York, *Nov.* 14, 1842.

We extract from a letter received from Dr. M. W. Phillips, dated

"*Log Hall*, *Amsterdam P. O. Mi.*
Oct. 22, 1842.

"In one of your numbers, the "Bermuda grass" and the kind cultivated by Mr. J. J. McCaughan, on the sea coast, are spoken of as being different. I have some of *both* of these now in my yard, they are to my judgment identical—both having leaves and *seed stalks* precisely alike, Mr. McC. being kind enough to send me some, on the ground of his being the "Simon Pure" and not seeding, but here *it has seeded*, and is the same.

We are all as busy as bees, gathering our crops. Immediately in this neighborhood, our crops are good. I shall make 6 to 7 bales cotton, and 250 to 275 bushels of corn per hand, with sweet potatoes, peas, forage, &c. in abundance. I do not plant for a cotton crop, having got a few Berkshires, part bred Durhams, &c. that I am trying to provide for, but think ere the year closes, that my nett proceeds will not be far behind the most of them. I am inclined *now* to think the cotton crop will be an average one. A short time since I did not think so; but the yield of wool is greater than has been for years. I ginned out 393 lbs. of seed cotton, and weighed 132 lbs. of clean cotton. I did all the weighing and ginning *myself*."

For the American Agriculturist.

Gent.—The following is a receipt for curing hams, which I tried last fall, and found superior to several other modes I had before tried, the hams and shoulders being far sweeter and better flavored, and preserving well through the summer.

"Dissolve two ounces of saltpetre and two teaspoons full of saleratus in strong brine, for every sixteen pounds of meat; boil and skim, the above thoroughly, and add molasses in proportion to one gallon for each hogshead of brine.

"Let the meat remain in this pickle three or four weeks, then smoke with hock downward."

Packing hams in oats in such a manner as not to allow two to come in contact, preserves them in a much better condition than any other mode I have seen practiced.

Yours, &c.,
C. Starr, Jr

Mendham, N. J., *November*, 1842.

To Correspondents.—The account of the Genesee Co. Fair was received too late for insertion in this number. It will appear in our next.

The letter from Solon Robinson came too late for insertion.

SELECTIONS.

(From the New Farmers' Journal.)

Natural Silicate of Potash, for Manure; in Felspar and Granite.

On a future occasion I may have something to say about the nitrogen; but my present object refers to potash, which being drawn from the soil by every crop, requires constant renewal. Wood ashes are not produced in this country, in sufficient quantity; burnt weeds and leaves, and the farm-yard straw returns only a part of what was drawn from the soil; the potash in the food, both of man and beast, coming off chiefly in the liquid excrement, and running to waste, not only in town sewerage, but too often in farm-yard drainings. Leibig's artificial silicate of potash, referred to by Mr. Trimmer, for agricultural purposes, may be more likely realised in the woody districts of Germany, than in our coal-burning country, where the potash itself seems to be wanting.

There is, however, in our vicinity, an inexhaustible store of this alkali; though not hitherto thought of as a manure, nor in its present hard and durable state, fit for the purpose. If slate and dunstone contain potash enough to fertilize their soil, felspar comprises it in much larger proportion, about 17 per cent. of its weight; and felspar is the basis of Dartmoore granite. This granite may contain about 10 per cent. potash (varying, of course, with the proportion of felspar), in too hard and compact a state to yield to the weather, fast enough for the purposes of manure. But this hardness is not difficult to reduce. By turning it whilst red hot, into water, it is rendered quite brittle and crumbly; and being then mixed with fresh lime and water, is made much more susceptible of decomposition; and easily yields part, at least, of its potash. The surface granite, already softened by the weather, will not do, having already lost a part of its alkali; China clay, apparently decomposed granite, is almost entirely destitute of potash; and the soils formed upon granite are unproductive, probably from the same cause.

The chippings and fragments of the solid stone accumulating at the granite quarries, may be heated with turf, in the common lime kilns, and raked down into water, as fast as they get red hot; in which manner many tons yer day may be done in one kiln. Thus rendered brittle, it may be rapidly crumbled by a water power crushing mill. And as turf and water power are both plenty about the granite, this rough powder might be sold to the farmer at a lower price than lime.

A ton of this powdered granite mixed with a ton of fresh lime, being heaped on a thick bed of earth, and closed in all round with earth, leaving the top open; water is to be poured on gradually, enough to slake the lime entirely, and then all covered in; the bed of earth at the bottom being one or two feet thick, and round the sides eight or nine inches; making good the cracks produced by the swelling of the lime in slaking. After two or three days it may be uncovered; the granite and slaked lime well mixed up with water, to a soft mortar; and again all covered in close with earth. In this state it may be left two or three months at least, and better if longer; keeping it wet and soft. When wanted to use, the whole heap should be well mixed together, including the earth, which will be impregnated with solution of potash. It is then fit for spreading.

Two hundred weight of granite will contain as much potash as a good acre of wheat (say thirty bushels) including the straw. Hence a ton, prepared as above, might do (reckoning the time required for decomposition, and the other manures employed,) for two or three acres of light soil, once in four or five years. Loamy and dunstone soils are not likely to want potash so often. But in an article yet untried, we cannot recommend proportions with much confidence. Experiments, at first in a small way, with different proportions, on different parts of a field, exhausted of potash, but not of humus, and not over-limed, giving the whole about one hundred weight of bone dust per acre, or a ton night-soil, that the crop might not fail for want of phosphates, would furnish some indications for future guidance. Its durability must be determined in the same way; of course the faster it is decomposed, the greater will be its early effects, and the less its permanency.

The object is to convert the hard crystalline alumino-silicate of potash into a crumbly calcareo-silicate of potash, much more susceptible to moisture and to the weather. Thus prepared, it yields its potash very slowly; and if required more active, it may be melted in a reverberatory, with 10 per cent, of salt; but this would add so much to the cost as to pay only where granite or felspar requires long carriage, and where fuel is cheap. In general it would be better economy to make up the activity by quantity, and thus get durability at the same time.

Basalt, or any other rock rich in potash, will answer the purpose where granite or felspar is too distant for carriage. I am, &c.

October 4th, 1842. J. PRIDEAUX.

A NEW VARIETY OF COTTON.—We have upon our table a specimen of an improved kind of cotton, which is the result of experiments with the Oceana, Mexican and Egyptian, of which it is a mixture. Dr. Lovelace of Wilkinson county, who is the propagator, furnishes with the specimen, only a few of the particulars with regard to the plant, which we would be glad to know. He says:—"The hybrid plant, which for the sake of distinction, I have taken the liberty to style Polycarp, possesses many peculiarities, some very remarkable, a more particular account of which will perhaps be given to you at some future day. I will merely remark here that, it differs very strikingly in the shape of the stalk, leaves, pods, quality and length of fibre of the cotton, from either of the other varieties. One of my neighbors says that, "it is the most beautiful cotton plant that he ever saw, and that he would like to cultivate it, if it were for its beauty only:" and another, after observing the vast number of bolls and squares upon it, "that it came up exactly to his idea of perfect cotton." This cotton has been put into the hands of *judges*, who pronounce it to possess the requisites of fine cotton, but express a doubt about its productiveness. Its strength is sufficient, its evenness is its best recommendation, its fibre finer and longer than the common cotton, but not in either respects equal to the Sea Island, and its color very good. It is, apparently, a green seed. We are told that for length of fibre and other qualities of the best cotton, the old Black Seed is preferred, but it does not produce enough to make it profitable. This then is the desideratum, to get a kind uniting the qualities of the finest with the necessary proclivity to *yield*. The Dr. speaks in another part of this letter of the necessity of trying this seed another year, in better hand, to learn whether it will be profitable to plant. If he finds its "vast number of bowls and squares" mature to a large size and open well, he will have occasion to congratulate himself on the result of his experiments. We bespeak a sample of the next season's product, if he meets success, with an account, at length, of his whole experiment. Will some correspondent who has the Chinese cotton, give us the result so far ascertained, of the trial now making with this plant.—*Southern Planter.*

THE COW-PEA.—Probably some of our planters do not attach sufficient importance to the cow-pea as a means of preserving the fertility of their land. The experience of our oldest planters proves that its cultivation is a matter of the first importance. Mr. Michael Cordy, of Bayou Sale, informs us, that his land has been under cultivation for twenty-eight or thirty years, and during the time it has deteriorated very little. He has devoted great attention to the cultivation of the cow-pea, which has been the principal means he has used for resuscitating his land. He informs us that he recently got from New Orleans a new species of pea which he considers far superior to the common cow-pea. He sows it half way between each hill of corn, when the latter is quite low, and it does not spread so fast as the cow-pea, leaving for a considerable time, plenty of room to work the corn. About the time the corn is ripe, it spreads most rapidly and luxuriantly, and yield well. It makes most excellent fodder, and the pea is very fine for the table. The new pea will be found a most valuable acquisition by our planters. None of the Northern grasses, of which we hear so much, can compare with the pea for fertilizing our soil. What clover does for the Northern farmers, the pea does for us.—*Planter's Banner, La.*

Animal Manures.—Carcasses consist of bones, flesh, fat, and other soft parts. The flesh contains, according to chemical analysis, in 100,000 parts, on an average, 77,170 parts of water; 15,800 muscular fibre, vessels, and nerves; 1,900 cellular tissue; 2,200 albumen, and serum of blood; 1,800 osmazome, with a little lactite of soda, potash, and chloride of lime; 150 mucous matter; 900 phosphate of soda, and 80 phosphate of lime. The muscular fibre, vessels and nerves, the cellular tissue, albumen and serum, osmazome and mucous matter, are those substances of the flesh which contain abundance of nitrogen, sulphur, phosphorus, and chlorine, and possesses a high value as a manure. Of much less importance is the fat, which in its pure state consists only of carbon, hydrogen, and oxygen; and it would be still less worth if there were not the cellular tissue, in which the fat is contained, to which the manuring quality of the refuse of the tallow melter is to be ascribed.

The flesh of animals dying a natural death soon passes into a state of putrefaction, as it is not deficient in water, and it develops during that process a great quantity of ammonia, phosphuretted hydrogen, and some other putrid gases, not yet sufficiently known; if, therefore, nothing of these substances is to be lost, it must be, as soon as possible, mixed with matters which are able to receive and chemically bind the gases thus developed. In Belgium the flesh of dead animals, or such as have been killed on account of being diseased, is cut immediately into small pieces, which are divided over the field, and soon covered by ploughing them in. Against this procedure nothing can be said, provided the soil contains much humic acid, by which the developed ammonia can be chemically fixed. Still it is better to cut the flesh of carcasses in small pieces, and put it, with moist soil rich in humus, into a hole where it may rot, by which means all the ammonia will be chemically fixed. The bones also, which do not require to be bared of flesh, may be equally placed in the hole, and afterwards taken out and used by themselves. We generally find it stated that carcasses should be mixed up with quicklime, and thrown into a ditch, where they may decay; but this occasions a considerable loss of fertilizing materials, because the greatest portion of the nitrogen escapes. For if a portion of it combines with the oxygen of the atmospheric air, and forms nitric acid, which may enter into chemical combination with lime and ammonia, and so becomes nitrate of lime and ammonia; still most of the nitrogen combines with hydrogen, and escapes under the form of ammonia. If nitrogen is not to be wasted, no lime should be added, nor is it at all necessary, if the carcasses have been mixed with soil rich in humus.

The Entrails of dead animals are to be treated in the same way as the flesh, if they are to yield the greatest advantage as manures. After they have been frequently worked up with humus soil, and are properly decayed, they form an admirable top-dressing; but must always be used in small quantities, or they will make vegetation push too luxuriantly.—*Sprengel.*

To keep Sweet Potatoes.—Level a dry piece of earth, so as to form a circle of six feet in diameter; cover it with dry hay, and on this empty the potatoes until they form a cone of 4 or 5 feet high. Over this scatter dry grass, and over the grass, place corn stalks. Cover the whole with earth about a foot deep, without any opening. Insert in the ground, around the pile, four forked posts, on which rails may be placed to support boards to protect the pile from rain.—*Plant. Ban.*

NOTICES OF THE PRESS.

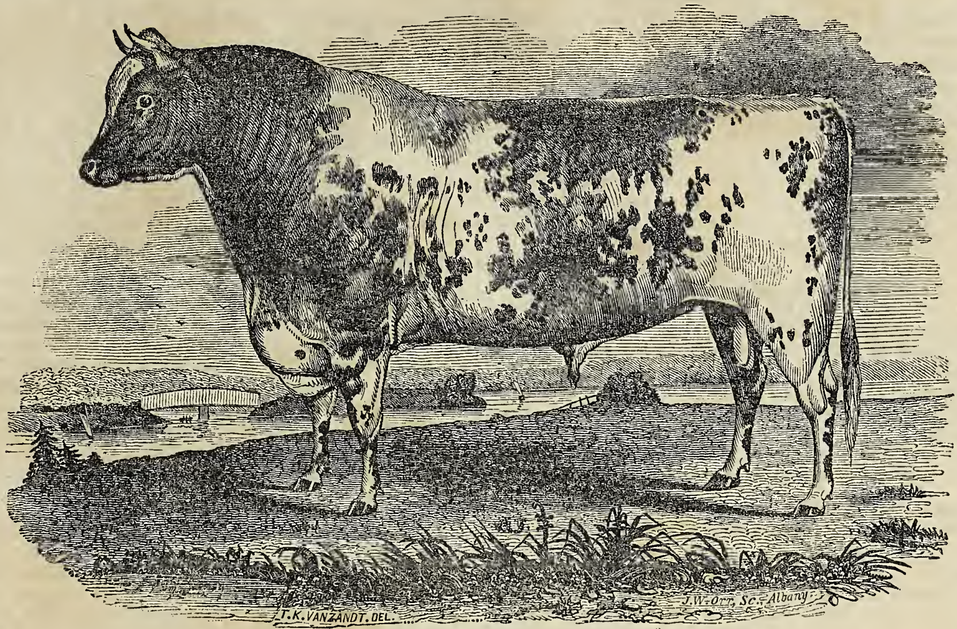
A Geological Report upon the Fourche Cove and its immediate vicinity, by Byrd Powell, M. D., with a Geological Map, Little Rock, Arkansas.—We are indebted to W. W. Stevenson, Esq., for the above brief, though valuable report. The author has well set forth the money-saving benefits resulting from a knowledge of science, in the following remarks.

"Geology lies at the foundation of a large portion of those great improvements by which society is civilized and placed in advance of barbarism. The improvement of a country in canals, rail-roads, mining operations, and in the discovery of those natural productions which are indispensable to the arts of civilized society, must advance very slowly, empyrically, and expensively, unless guided by the lights of Geology.

"In Pennsylvania, at the Mauchchunk Coal Mines, a company lost, in one enterprize, $80,000, which could have been prevented by three hours' labor of a practical geologist; or, if the company had possessed such a knowledge of the science as should constitute a part of the education of every gentleman, the occurrence could not have happened. Blunders of equal magnitude, but not of equal expense, are committed, to my own knowledge, in every part of this country, in digging and boring for salt and fresh waters. It not unfrequently happens, furthermore, that articles, indispensable to domestic life, are imported, when, at the same time, they exist, perhaps, upon our own possessions. In confirmation of this remark, we have before us the fact, that roof slate has been freighted here from the north, while the same article exists in abundance within three miles of the city. It is also true that a comparatively fragile and decomposable sand-stone has been brought from Cincinnati to this place, for architectural purposes, when a granite of a more beautiful and enduring character, and admirably adapted to the same purpose, obtains in great abundance within four miles of the city. I think it probable, furthermore, that hydraulic lime has been shipped from Louisville to this place, when it might have been procured within the corporate limits of the city. Finally, the great abundance and variety of geological productions used in, and almost indispensable to, the arts of civilized society, which I have developed in a few weeks, and that, too, within a very small compass, ought to induce every young man who is receiving an education, and every gentleman of leisure, to devote a liberal portion of his time to this subject." We should be happy to increase these extracts did our limits permit.

Address delivered before the Ag. Soc. of Newcastle Co. Delaware, by Hon. Jas. M. Garnett, of Virginia.—We have been favored by the author with a copy of this valuable address, which is characterised by his usual sound and practical views. Few men are doing more for the advancement of an enlightened and profitable system of husbandry, than Judge Garnett. We regret that a want of room prevents our giving a portion of this address to our readers.

We are indebted to an unknown friend for the Constitution and Address of the Rensselaer Co. Ag'l. Society. Also, to Messrs. A. J. Downing & Co. of Newburgh, for a better and more systematised catalogue of the Fruits and Ornamental Trees and Plants of their Nursery, than we have before seen.



DUKE OF WELLINGTON, owned by Geo. Vail, Troy, N. Y.

Pedigree.—Duke of Wellington is a Roan Bull, bred by Thomas Bates, Esq. of Kirkleavington, Yorkshire, England, calved October 24, 1839, got by Short Tail, (2621,) Dam Oxford, having obtained the first prize for the best Short-horned Cow, open to all England, in July, 1839, given by the Royal Agricultural Society, by Duke of Cleaveland, (1937;) grand dam Matchem Cow by Matchem, (2281,) great grand dam by Young Wynyard, (2859,) sometimes called Young Wellington.—(Page 494 Coate's Herd Book.)

Short Tail, (2,621), bred by Mr. Bates, got by Belvidere, (1,706,) dam Duchess, (XXXII,) by Second Hubback, (1,423,) g. dam Dutchess, (XIX.) by Second Hubback, (1,423,) g. g. dam Duchess, (XII.) by The Earl (646,) g. g. g. dam Duchess, (IV.) by Ketton (II.) g. g. g. g. dam Duchess, (I,) bred by Mr. C. Colling, by Comet, (155,) g. g. g. g. g. dam by Favorite, (252,) g. g. g. g. g. g. dam by Daisy Bull, (186,) g. g. g. g. g. g. g. dam by Favorite, (252,) g. g. g. g. g. g. g. g. dam by Hubback, (319,) g. g. g. g. g. g. g. g. g. dam (bought by Mr. C. Colling from Stanwix,) by Mr. James Brown's Red Bull (97.)

In a recent visit we made at the hospitable mansion of Mr. Vail, we understood him to say, that one of the two young bulls out of his beautiful cow Dutchess, imported from Mr. Bates, and got by the Duke of Wellington, was for sale.

EDITOR'S TABLE.

Sale of Short Horns *in England.*—It is refreshing, to turn from the meagre sales and small prices of pure bred animals in our country at some of the late Fairs, to those reported from England at the Ag'l Fairs during Sept. last, in the New Far. Journal. Notwithstanding these animals have been bred for so long a time, and the fact that there are thousands turned over to the shambles annually, the same spirit exists for sustaining and improving their breeds, that has ever been manifested among those enlightened breeders.

At Mr. Parkinson's sale of Short Horns, held 17th September, the average price for the entire lot exceeded $150 each. Those by Cossack, very young, exceeded $170 each; while a pair of twin heifers brought 675 dollars.

Mr. Smith, of West Rasen, sold his entire herd. The 2 yr. old bull Lord Adolphus Fairfax, by Sir Thomas F. sold for $275; and the 7 yr. old cow Nectarine, by Norfolk, the sire of Sir Thomas Fairfax, sold for $750. The average price was about $165 each. Four bulls, the get of Cossack, were lately sold for $1000 each.

300 *Sheep* were sold in lots of 10 each, at nearly $10 per head.

When we consider the extensive depression of the times, and the multiplicity of improved animals in England, together with the large lots of cattle, exceeding 100, these are encouraging prices. Let not our American breeders despair. We shall have remunerating times yet, for such as have choice animals. Breeders and consumers in this country, will yet open their eyes to the great advantages of improved stock, and such as carefully, and patiently, and intelligently continue their operations, will ere long meet the reward of their labor.

The New England Farmer.—We are greatly indebted to the editor of this valuable work, for the spontaneous greeting offered us in his last number, which he may be assured we cordially reciprocate. Twenty-one volumes of this well sustained paper, are a sufficient guarantee of its value and usefulness.

White Carrots, *as a field crop.*—We have elsewhere than in our paper, had frequent occasion to call attention to this valuable variety of roots, and we are glad to find in the N. E. Farmer, a notice which induces us again to speak on this subject.

It states that B. V. French, Esq., near Boston, Mass., raised this year over 22 tons per acre, on ground not particularly well prepared for roots. He attributes his success principally to *sub-soil plowing* this land, in the spring of 1841. In addition to its being proverbially a great yielder, it possesses another important advantage in deriving a great portion of its nutriment from the atmosphere, and the beet-like protrusion of its roots above the surface, render it much easier to gather than the ordinary carrot. We have cultivated them for years, and speak advisedly on the subject.

Mediterranean Wheat.—We see this variety of wheat is very much lauded of late, as being *proof against the fly, mildew, and rust.* Some who have raised it, however, inform us that they have not realized in its cultivation, all the advantages claimed for it, and that in these respects it is not better than many other kinds raised. We advise all who can try the experiment fairly and impartially, and at not too great expense for seed, to do so. "Prove all things, and hold fast that which is good," should be the motto of every intelligent farmer.

Prices of Long Wool.—We are told by wool dealers in this city, that the long wool from the Cotswold, Leicester, and Lincolnshire Sheep, is now worth in this market, 23 cents per pound. Attempts are about being made in the United States, for the manufacture of worsted stuffs from this wool. The large quantity now produced in this country, the requisite skill in manufacturing, and a protective tariff combined, will, it is hoped, make the experiment entirely successful.

Salt and other Condiments for Animals.—All domestic animals should be abundantly furnished with salt. A supply kept within their reach *at all times* is best. Their comfort, thrift, and health is essentially dependant on this. Horses and pigs should have ashes occasionally given them in their food, in addition, and the latter ought at all times, when confined in pens, to be supplied with charcoal, as, besides being a medicine, it is a cheap and valuable *food. Lime*, or *chalk*, which is another form of lime, may, with great advantage, be given to horses and cattle, or placed within their reach, so that they can use it as nature dictates. *Clay* is frequently sought for by horses and eaten with avidity, and we believe with decided benefit to their health. A fine stud we kept for some years, always ate it when within reach, and a heartier, healthier, or more easily kept horse we never saw.

Warm Shelter for Animals.—If our farmers knew the saving of *food*, which resulted from supplying their dumb beasts with warm, dry shelter during the winter, they would find their *interest* dictated a policy, which their *principle* urges in vain. If *humanity* fails to move them to a reform in this matter, we hope the *love of the all-engrossing dollar* may.

Soaking Corn for Horses.—There is a great saving in feeding horses with *soaked corn.* When fed dry, they do not masticate it well, and when it enters the stomach, the nutriment is not thoroughly extracted. After feeding on dry corn for some days, we have found that horses refuse it altogether, or take it only in very small quantities, owing to soreness in their teeth and gums, and when compelled by hunger to eat it, it is swallowed almost entirely whole, and of course with little or no benefit to them. By soaking it in the ear in two casks, to be fed out alternately, they will eat it freely, cob and all. Two bushels soaked, are worth three dry. If they refuse to eat at first, they should be starved to it, and when once accustomed to the soaked, they prefer it to the dry.

Comparative cost of Pork and Cotton.—The S. W. Farmer, in a long and careful calculation, estimates the cost of producing pork at rather less than one-half the cost of producing cotton, pound for pound. We like to see these estimates with the data on which they are founded; but we opine the calculation for pork raising, will be very much affected by the *kind of animal fed;* as the improved breeds might lessen the cost materially, while some of the *shovel noses*, would increase it to several times the cost of the cotton.

Eclipse.—*The celebrated American Horse Eclipse*, twenty-eight and a half years old the 24th of November, is now in full health and vigor, and for sale by Mr. Wm. Dodd, Georgetown, Ky. We are not aware of any well authenticated horse, that can boast as much at his age, and after undergoing so much service.

New Disease in Swine.—We have received an interesting and important letter from Dr. A. Campbell, of Middletown, Ohio, describing a disease which has lately been prevalent among swine in his neighborhood, and the treatment of a few cases, and are promised a more full detail hereafter. Dr. C. need not fear that the dignity or laurels of his profession will suffer in this or any other quarter, by attending to, and describing the disease of any of the animal creation, however humble. When the late distressing epidemic broke out in England among cattle, sheep and swine, the Royal Ag. Soc. thought it a subject worthy of appointing a special commission of the ablest and most experienced Veterinary Surgeons, to investigate and report upon it. Members also of the medical profession, and those too who stood high in it, volunteered much time and attention to the same subject in their respective neighborhoods.

After speaking of several losses sustained by Mr. Hendrickson, of Middletown, one of which was Royal Charlie, a fine boar pig by Windsor Castle, the very picture of his sire, and for which Mr. H. had repeatedly refused $50, being of enormous size and very fine in all his parts, he says, "When first attacked, they lose the use of their limbs, become as cold as a mass of ice, the tongue and mouth turn purple, and they die in from six to ten hours. They resemble precisely the cases of cholera that I often witnessed here in 1833 and 4, in the collapsed stage, and in the congestion of all the internal viscera, with an almost suspended circulation.

When Kenilworth was attacked, Mr. Hendrickson sent for me, and I went up immediately. I hope you will consider it no descent from professional dignity for an M. D., backed by some half dozen diplomas from distinguished Medical Societies, to doctor a pig. I was disposed to laugh at Mr. H. about his lamentations over the death of Royal Charlie, but when I came to see Kenilworth prostrated—a fallen giant—a Samson shorn of his locks, I could scarcely refrain from manifesting the same childish feeling. He was unable to rise, and I bled him under the tongue, rubbed with hot soap-suds, gave him 12 oz. linseed oil, ½ dr. Cayenne pepper, 2 sc. spirits turpentine. This was on the 27th Oct., and the result was, that reaction was completely established. On the 30th he got up and walked across his lot, took some milk, and we supposed that he would certainly recover, but were disappointed by finding him lifeless on the following morning. When opened, his lungs were found to be perfectly filled with dark gummous blood, and an abscess formed containing a considerable quantity of matter. If the remedy could have been applied a little sooner, I think we should have saved him."

As a preventive to this disease, Dr. Campbell recommends occasionally a small quantity of sulphur with charcoal, or pearl ashes mixed in their food; that the stock should be housed if possible, at night, and be suffered to run out on dry ground through the day. Ashes we know to be a good preventive, or a little lye, and salt as a matter of course, mixed in their food.

American Flour.—It is asserted by one of the most eminent bakers in London, that American flour will absorb from 8 to 14 per cent. more, of its own weight of water in manufacturing it into bread or biscuit, than the English wheat. Mrs. Rumdell states in her "Domestic Cookery," that while 14 lbs. of American flour will make 21½ lbs. bread, the same quantity of English flour will produce but 18½ lbs. This fact will explain what we have said in another article in this No., on the subject of wheat. We have numerous specimens of English and American wheat of similar varieties, and the English is almost invariably a larger and plumper berry than the American. We attribute this to the longer time required for ripening in that cooler, damper climate, by which it absorbs and retains a larger quantity of water. Ours, on the contrary, in ripening under a dry, hot sun, evaporates a larger proportion of the water, and leaves the farina in a more condensed state; and when exposed again to moisture in cooking, it absorbs the additional quantity above stated. This is an important fact, of which the dealer and consumer should be fully aware.

We see our southern friends claim this quality exclusively for their own wheat, which is doubtless true in part, but not wholly in comparison with English. It is a well known and long established principle, other things being equal, that a warm and dry climate gives a richer grain than a cold moist one.

Cow Pea *as a fertilizer—a new variety.*—We call the attention of our Southern readers to a brief article from the Franklin Planter's Banner, La,. on the subject of introducing the Cow Pea extensively as an article of food, and as a fertilizer. Now is the time to commence and sustain a vigorous *system of improvement in their soils*, before they shall have been reduced by severe cropping. An ounce of prevention is better than a pound of cure.

Agricultural Fairs.—The notices and reports of the different Fairs for 1842 have crowded out much important matter from this number. But we have devoted a large space to them, as they are of a practical character, and therefore especially worthy the farmer's attention.

An important article on the subject of our Agricultural Exports is crowded out of our present number. It will appear in our next.

☞ Subscriptions to our work may be made to commence with the first of January next, and continue *for one year*, at the option of subscribers. The January number will be the 10th of the present volume, but as we stereotype the work, subscribers are at liberty to begin with such numbers as they choose. It is desirable that such as intend commencing with our next number should send in their subscriptions as early as possible.

Dimensions *of the thorough-bred Short Horn Heifer, about* 5 *years old, raised by Ed. Tonkins, Esq., of Gloucester Co., N. J., which took the first premium for fat cattle, at the Am. Institute Agricultural Show in October,* 1842, *open to the U. States.*

	Feet.	In.
Length of head	1	9
Girth of throat	3	2
Length from root of horn to pin bone .	7	6
Do of neck to shoulder point .	1	9
Do do and shoulder to place of girth	3	0
Girth	8	5½
Do of flank	8	6½
Width across hips or huckles . .	2	5
Do through round bone, or thurl, or after hip	1	11
Do do flank . . .	1	10
Height to top of hips . . .	5	0
Do do shoulders . .	5	0
Distance between fore knees inside, in usual position	1	2½
Depth between top of shoulder and brisket	3	4½
Width through shoulders . . .	2	5
Girth of fore ancle . . .		7½
Do hind do		9
From point of hip or huckle to pin bone	2	3
From hip or huckle to hock or gambril .	3	7
From hip to shoulder blade. . .	2	9

Live weight *estimated* at about 3000 lbs.

Two Good Tenants Wanted, to go to the western part of this state, and take separate but adjoining farms, with a lot of improved stock. Unexceptionable testimonials as to character and capacity will be required, and a small amount of capital to invest in the stock and farming tools. To such as are every way qualified, the above offers a better inducement than can be found elsewhere. Address the editors of this paper.

FOR SALE.

A Full Blood SHORT HORN BULL, 3 years old 22d April last, bred by W. K. Townsend, Esq.. Conn. For particulars, inquire of the editors of Am. Agriculturist, or of the subscriber, at Mendham, Morris Co., N, J.

Nov. 1842. Charles Starr, Jr.

Wheat Sheaf FARM on Staten Island, for sale.

A recent domestic bereavement has induced the undersigned to offer his residence, on Staten Island, for sale. It is situated midway of the outer bay, on the sea shore, eight miles from the quarantine Ferry, three from that of Rossville, and equi-distant from two others, Seguine's Landing and Port Richmond.

The condition of the Farm—the extent, value, and practical usefulness of the improvements and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upwards, each including an appropriate allotment of woodland—each division offering a moderately elevated building location. Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product.

W A. SEELY, 218 Fulton-st. N. York.

ISABELLA GRAPE VINES,

Of proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their locality is not too far north.) All communications, post paid, addressed to R. T UNDERHILL, M. D. 400 Broadway, N. Y., will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grape vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, all the Western, Middle and Southern States. October, 1842.

REVIEW OF THE MARKET.

Prices Current in New-York, November 23, 1842.

ASHES, Pots, per 100 lb.	$5 50	to	5 62
Pearls, do.	5 87½	..	—
BEESWAX, Yellow, per lb.	29	..	29½
COTTON, Louisiana, do.	6	..	10½
Upland, do.	5¾	..	9
Florida, do.	6	..	9
Alabama, do.	6	..	10
FEATHERS, American, live, per lb.	25	..	30
FLAX, American, per lb.	8	..	8½
FLOUR, Northern and Western, via Erie Canal, per bbl.	4 31	..	4 37
do. via N. Orleans,	4 25	..	4 31
Southern, per bbl.	4 37	..	5 50
RYE, per bbl.	3 25	..	3 50
MEAL, Corn, per bbl.	2 68	..	2 88
do. per hhd.	13 00	..	13 25
WHEAT, Western, per bushel,	80	..	90
Southern, do.	70	..	80
RYE, Northern, per bushel,	70	..	00
CORN, do. do.	54	..	57
Southern, do.	49	..	53
BARLEY, per bushel,	48	..	50
OATS, Northern, per bushel,	27	..	28
Southern, do.	20	..	23
PEAS, Field, do.	86	..	1 15
BEANS, White, per bushel,	1 21	..	1 43
CLOVER SEED, per lb.	6½	..	7
TIMOTHY SEED, per tierce of 7 bu.	10 00	..	10 50
FLAX SEED, rough, do. do.	9 50	..	10 00
clean, do. do.	—	..	—
RICE, per 100 lb.	2 87	..	3 12
HEMP, Russia, per ton,	210 00		215 00
American, water rotted do.	280	..	—
HOPS, first sort, per lb.	10	..	12
LEAD, Pig, per lb.	3¼	..	3⅜
Sheet and Bar, per lb.	4½	..	5
OIL, Linseed, American, per gal.	86	..	90
PLASTER OF PARIS, first quality, per ton,	2 25	..	2 75
unground do.	1 81	..	1 88
BEEF Mess, per bbl.	6 00	..	6 50
Prime, do.	2 75	..	3 25
Cargo, do.	1 75	..	2 00
PORK, Mess, do.	7 50	..	9 50
Prime, do.	5 00	..	6 50
LARD, per lb.	6¾	..	7
BUTTER, best Table, per lb.	13	..	15
Western, good, per lb.	10	..	13
Shipping, do.	6	..	8
CHEESE, in boxes and casks, per lb.	5½	..	6½
HAMS, Smoked, per lb.	7	..	9
Pickled, do.	—	..	—
Shoulders, smoked	—	..	—
BEEF, Smoked, do.	6	..	7½
SALT, Liverpool, ground, sack	—	..	1 47
do. fine, do.	1 62½	..	1 76
SUGAR, New Orleans, per lb.	5	..	6
TOBACCO, Virginia, do.	3	..	5
Kentucky, do.	2½	..	5
TALLOW, American, do.	8	..	8¼
WOOL, American Saxony fleece, per lb.	32	..	37½
Full blood Merino do. do.	28	..	30
Half to three-fourths do. do.	24	..	26
Native to half do. do.	18	..	22
SHEEP PELTS, each,	—	..	—
HAY, per 100lb.	56	..	62½
POTATOES, new, per bushel,	25	..	—
EGGS, per 100,	1 00		—

Remarks.—The only material change we note, is a slight advance in *flour*, which will probably be sustained through the winter; and a decline in *provisions*. *Wool* is rather firm. We subjoin remarks from an English paper on our provisions abroad.

Liverpool and American Provision Market, Nov. 2.

Cheese—In this article we are improving in prices, and good is freely taken at an advance of 3s to 4s per cwt. Our stock continues small, and is all expected to be taken off at the public sale 8th inst., where we think 55s or 56s will be obtained for very prime lots. Beef—This article still moves very heavily, and may be said to be quite out of favor with the public, arising no doubt, from the old cause of bad curing and packing. Only 800 barrels have been taken since the 8th ult., for consumption. Fine Canada commands 45s per barrel, while the best U. States will not bring over 38s. Pork—Since our last we have had considerable sales of this article at improved rates, for the very best, which is decidedly getting into favor. Since the 8th ult., when the duty came down to 8s per cwt., there have been taken 3300 barrels for consumption, and about 600 barrels for export. Choice parcels are freely taken at 44s to 48s per barrel, duty paid, and one lot of very prime United States has commanded 54s duty paid. Hams—Very prime are still in demand, and 54s per cwt. has been obtained. The demand for Wet Hams is very moderate, arising doubtless, from the very bad manner in which they are cut and cured. Lard—The demand for this article is still increasing. For very fine, 33s might be obtained and the Tallow Chandlers are now seeking the middling and inferior sorts at 35s, and will pay more.

New York Cattle Market—Nov. 21.

At Market, 1300 head of fresh cattle; 40 cows and calves, and 2500 sheep and lambs. Prices—Beef Cattle were dull, and prices ranged full 25 cents per cwt. lower than last week, and we give $3 50 a $5 25 as the range at present; 275 left over. Cows and Calves—All at market but 8 sold at from $25 a $38. Sheep and Lambs—All at market sold at from $1 to $2 25 for lambs, and $1 25 to $4 25 for sheep.

Works pertaining to Agriculture for sale by Saxton & Miles, 205 Broadway.

Johnson's Elements of Agricultural Chemistry and Geology, 50 cents; Do. do. 1 vol. 12mo. $1; Gray's Botanical Text Book, $1 50; Lindley's Horticulture, $1 25; Gray's Agricultural Chemistry, $1 00; Downing's Landscape Gardening, $3 50; do. Cottage Residences, $2 50; Leibig's Organic Chemistry, &c. &c.

Orders from any part of the United States punctually attended to, at the **cheap cash book store, 205 Broadway.**

SAXTON & MILES,
PUBLISHERS AND BOOKSELLERS,
205 BROADWAY—NEW YORK.
Wholesale and Retail Dealers in Theological, Classical, Agricultural, Health, Miscellaneous and School Books.

S. & M. intend keeping a full supply of all works relating to Agriculture and its improvement, and to the sciences connected therewith; and to make their store a Depot, where the Farmer especially can find any thing he may wish, whether pertaining to his business or otherwise; and also where he can send his orders for books, with the confidence that they will be promptly and faithfully attended to.

THE HEALTH ALMANAC for the YEAR 1843.—*Devoted to the Law which regulates the animal, originally designed for the Spirit of Man—By a* Vegetable Eater.

CONTENTS.—Equinoxes and Solstices..Eclipses in the Year 1843—Calendar, with Maxims on Health, Law, Policy and Mind—Agricultural Statistics of the U. S. by Hon. H. L. Elsworth—Mastication—Life—Milk—Nothing made in vain—The Stomach and Internal Canal—Worms in Living Creatures—On Swine's Flesh as food—Original Food of Man—Relation of Man and Wife—Relation of Parent and Child—Preparation of Bread Stuff—Bread Making—Head Ache—Life and Death—Formation of the Teeth—Bankrupts—Eating—Query answered—Disease and Pain—Bathing—Sleep—Dreaming—General Differences of the Sexes of the Animal and Vegetable Kingdom—Rates of Postage, &c.

Published by SAXTON & MILES, 205 Broadway—price 6 cents single copy; 37 1-2 cents per doz.; $2 50 per 100; 20 dols. per 1000

R. H. HENDRICKSON,
MIDDLETOWN, BUTLER COUNTY, OHIO,

Is now prepared to fill orders for thorough-bred Berkshire Pigs, from the late imported boars Windsor Castle and Earl Craven, and twenty choice sows purchased of A. B. Allen, a part of his recent importation. Pigs in pairs from this superior stock will be furnished substantially caged and delivered on the canal at Middletown, or on board steamboat at Cincinnati, from $30 to $50, according to age and quality. Orders accompanied with cash, will always secure the preference.

ALSO—Pigs bred from the superb boar Kenilworth, of a stock of the largest and finest kinds of white hogs in England, also imported by Mr. Allen last October, crossed on the splendid large white Miami hogs of this country. The Miamis have been long noted for their large sizes. Animals of this breed have occasionally come up to the enormous weights of 1200 and 1400 lbs., and it is believed that the cross of Kenilworth on them, will easily attain the weights of 700 to 1000 lbs. at 18 months and two years old, if well fatted. Pigs of this cross $25 per pair, caged and delivered as above. Refer to the editors of this paper.

ORCHARD GRASS SEED,

Of the first quality, this year's growth. Orders received at the Office of the Am Agriculturist, where a sample may be seen.

Contents of this Number.

Editorial.—Composition and cultivation of Clay land, 257–260
Varieties of Wheat and cultivation, 261
Silk Raising, Reeling, and Silk gut, 263–268
Storing Roots for winter, 268
Report from the Agri. Dep. of the American Institute, 269 274
New York State Fair Reports, 274
Jefferson Co. and Washington Co. Fairs. 275
Correspondence.—Berkshire Co. Fair, 275
Hampshire, Hampden, and Franklin Co. Fairs, 277
Hartford Co. Fair, 278
New Haven Co. Fair, 279
Cultivation of the Grape and Strawberry, 280
City Manures, 281
Bermuda Grass—Curing Hams—To Correspondents, 282
Selections.—Silicate of Potash in Felspar and Granite, 282
New Variety of Cotton—The Cow Pea, 283
Animal Manures—Storing Sweet Potatoes, 284
Notices of the Press, 284
Cut and Pedigree of Wellington—Editor's Table, 285—287

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.--*Washington.*

Vol. I. **New-York, January, 1843.** **No. 10.**

A. B. Allen, and R. L. Allen, Editors. Saxton & Miles, Publishers, 205 Broadway.

THE AMERICAN AGRICULTURIST
will be published Monthly, each number to contain thirty two pages royal octavo.

Terms.--One Dollar per annum, payable strictly in advance.

Six Copies will be sent for $5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside.

Thirteen Copies will be sent for $10, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, post paid, No. 205 Broadway, New-York.

☞ **Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

TO OUR PATRONS.

In issuing the Tenth No. of the American Agriculturist, we cannot refrain from wishing our friends the compliments of the season, and may they, one and all, live to enjoy many a coming merry Christmas and happy New Year. They will find this number handsomely embellished and abounding in valuable original matter. We could have easily made it *entirely original*, as well as all the preceding numbers, but have preferred the course of inserting occasional extracts from our cotemporaries, when suited to our purpose and of a valuable kind. Any one of these, or of the excellent articles contributed by our correspondents, is not unfrequently worth the subscription price of this paper.

Our correspondence is extensive, embracing not only the different States and Territories of the Union, but the British Provinces, and foreign lands. We have taken measures to still further increase these entertaining and instructive communications, and also to add greatly to the embellishments of our periodical. It is our intention to make the forthcoming volume fully equal, if not superior, in matter and embellishments, to any Agricultural paper in America; and although some may have the advantage of a longer standing before the public, we hope we may be considered equally well entitled to patronage. Will our friends then, come forward to our assistance, and aid us with an efficient patronage, and increased exertions in our behalf?

If each of the subscribers we now have, would procure us FIVE additional names, we think our subscription list would be equal to that of any kindred paper. It is very easy for one and all to do this, and then they would be entitled to a *sixth copy gratis*, and have the consciousness of being co-workers with us, in elevating and enlightening the agricultural class—the *bulwark of the Republic*, and of aiding in spreading such information among it, as ranks second only to sacred and moral literature.

We feel under particular obligations to the press for the kind things already said of us, and as this is a period when new subscriptions to agricultural periodicals frequently commence, we again throw ourselves upon its indulgence, and shall be still more indebted by its future notices of our continued publication, and whenever it is compatible to copy this notice, we desire greatly that it may be done.

☞ *Postmasters* will please act as agents when agreeable with other duties, and also procure suitable agents for us. It is believed that not *one in twenty* of the farmers' families in America is yet reached by agricultural publications, and all would be conferring an inestimable good upon this most numerous, useful, and indispensable of all other classes of our citizens, by inducing them to subscribe for and read more works of this kind.

The American Agriculturist is stereotyped and back numbers can always be furnished, and having now an *extensive and fast increasing* circulation, it has become an excellent means of advertising.

We have received a great many flattering testimonials of our course in, and conduct of, this paper; but as we choose to give our readers practical useful matter in these pages, in preference to any thing which can be construed into self-vaunting and puffs, we shall close this address to our patrons, by saying that we do not feel the less grateful for their kind expressions and good wishes, and it shall be our humble endeavors to still further merit them.

Tour in England—No 9.

ENGLISH HORSES.—Notwithstanding what has been said about the degeneracy of the horses of England, the best informed we met abroad, think that on the whole, they are still improving. The forced mushroom growth they now give their racers, and above all, the early age at which they are brought on to the turf are, however, exceedingly prejudicial to their strength and endurance, if not to their speed, and if persisted in, must ultimately, if it has not already, materially injure the breed in these most desirable qualities. There are, however, some exceptions to the above observations. Harkaway, for example, is a real phenomenon, and is thought to be equal to any thing England ever bred. He is a horse of remarkable speed and of prodigious power and substance, standing within an inch of 17 hands, of great bone and muscle, and is considered among turfmen, as the very perfection of form for a race-horse. According to the official report, he won the Goodwood cup at five years old, carrying 130 lbs., performing the distance 2¾ miles in 4 m. 58 s., but according to another report, it was done in 4 m. 27 s., which would have been at the rate of a mile in 1 m. 37 s., but English time is very loosely kept, and but little to be depended on, unless reported by our own countrymen. There is no doubt but Harkaway is as good and fast a horse as Firetail, Eclipse, or Flying Childers ever was; although it is said of the latter, that he run a mile in one minute, and of the former that he performed the same distance in 1. m. 4 sec. But this time is not authenticated, and is, withal, so incredible, that it should be rejected as totally unworthy of record in the calenders of veritable racing.

We could not but admire the beauty of form and great size of the English colts. Most of them stood 15 hands high when brought out at two and a half years old, and some of them were full 16 hands; and as a celebrated jockey remarked to us, "it was really wonderful what the young things would do," and this sententious expression of the shrewd jockey, seems to be the whole gist of the thing, its sport and excitement. But to us it was a painful sight to see animals reared with such care and expense, one half of them broken down in training, and the larger share of the other half in early racing, and then cast like worthless weeds away; whereas, had they been kept till five years old before being brought out, they might have proved of some value, at least, as saddle horses, and for light cavalry. In one particular, however, we will give the English credit over the Americans, they usually make but one run, and to be called upon for four, five, and as it sometimes happens with us, even six heats, would be considered here, as we wish it universally was everywhere else, as the very height of cruelty, and an indictable offence. But this is a painful subject to dwell upon, and little interesting to the agriculturist; we will therefore pass it over, merely premising that owing to the manner in which English horses are now bred, it seems to be generally thought, at least on the western side of the Atlantic, they would prove no match for our racers in deep mud and over hard gravelly courses at four mile heats.[*]

The hunters of England are now nearly thorough-bred, are strong made, clean limbed animals, stoughter and more compact than the racer usually is, and reminded us of our finest high-bred carriage-horses, such as the more dashy cits prefer for a display in Broadway, or upon the Third avenue.

---

[*] Some object to this conclusion as too hasty, and say, for example, that Lady Elizabeth at five years old, carrying 135 lbs. ran four miles at the Doncaster course, in 1833, in 7 m. 35 sec. time almost as good as that of Fashion's late unequalled race in America of same age, and carrying only 111 lbs. But we are confident, on the fine elastic turf of the courses of England, that a horse can carry more weight with greater ease than over the harder and more unelastic courses in America, but as a discussion of this subject is more proper for a Turf Register than this paper, we shall forbear entering further upon it.

Carriage horses differ but little from those among us, save that they are usually larger, 16 hands being the general height, and we have occasionally seen them in most superb shape in the London parks, full 17 hands high. The stage coaches, omnibuses, cabs, &c., are recruited from the broken down hunters and condemned carriage horses, and are of course wofully cursed with grease, corns, founders, spavins, broken wind, and the whole catalogue of horse diseases, so much so, as to make one's heart ache at times, to ride after them; and the cabs, especially, in the *apparent age* and condition of their horses, would occasionally bring Mr. Pickwick's ride to the Golden Cross to memory.

"How old is that horse, my friend?" inquired Mr. Pickwick, rubbing his nose with the shilling he had reserved for the fare.

"Forty-two," replied the driver, eyeing him askant.

"And how long do you keep him out at a time?" inquired Mr. Pickwick, searching for farther information.

"Two or three veeks," replied the man.

"Weeks!" said Mr. Pickwick, in astonishment—and out came the note-book again.

"He lives at Pentonwill, when he's at home," observed the driver, coolly; "but we seldom takes him home, on account of his veakness."

"On account of his weakness!" reiterated the perplexed Mr. Pickwick.

"He always falls down, when he's took out o' the cab," continued the driver, "but when he's in it, we bears [reins] him up werry tight, and takes him in werry short, so he can't werry well fall down, and we've got a pair o' precious large wheels on, so when he *does* move, they runs after him, and he must go on—he can't help it."

Even the very gentlemanly and intelligent coachmen, who otherwise make themselves so agreeable on the road, have a cruel art, with their long lashes, of striking the ears of the jaded horses till they bleed, when they flag under other punishment, and are fearful to fall behind the set time of completing their stage.

As for trotters and a fast enduring compact roadster, we hope no one will consider us prejudiced when we say, that we think England is inferior to America east of the Alleganies. We easily beat the best English horses on their own ground, with what would be considered now as third rate trotters with us. They attribute this superiority merely to better training and riding; but according to our limited observation, we found agreat difference in the *animals*, for a few of our friends had American horses here with which we could make the comparison, and they struck us as being for their size, better boned, more muscular, powerful, and compact. In fact we cannot better express ourselves, than by saying, if the power of an English 16 hand horse, with a refinement of bone, were compressed to the size of 15 hands, this would then be the American with his enlarged strength, and a better and quicker action. There is no doubt but our drier climate and silicious soil, tend greatly to the hardening and refinement of bone, and formation of superior muscle with less flabby flesh in all horses bred east of the mountains.

The Galloways of England are much like our snug little horses of the north, but we found nothing here which we thought equal to the French Canadian, or like our Narraganset pacers, or those of Indian breed and celebrity. Nor have we anything so small and pretty in return, as the Dartmoor, Welsh, and Shetland ponies, now so well known among us by recent importations.

The large cart horse is used here more than any other kind for agricultural purposes, and is especially necessary in London and other old towns, to conduct the heavy loads of the brewer and coalman, in ponderous carts and wagons through the narrow crooked streets, harnessed in single file. These animals are very large, generally 16½ to 17 hands high, and sometimes 18 hands. Some of them are good walkers, and being very powerful, are not without merit; but they are great consumers, and have too much flabby flesh to suit our taste. The long coarse hair on their legs from the knee joint down, is very objectionable, and when worked in a heavy soil, it gathers a great mass of clay to each leg, which adds several pounds weight to their feet, and makes one think of a condemned criminal working with a chain and ball attached to him for punishment. This long hair also makes them subject to the grease, as we were informed, a very unpleasant disease of the feet.

Superior stallions of this breed, however, command not unfrequently a large price, and have sometimes sold as high as £1,000. Those we saw in Sussex we thought the finest and best of this breed. They had very little of the objectional long hair upon the legs, and were more compact generally and active than those we met in other parts of England; they probably had a cross of the old Suffolk Punch in them, which had the reputation in its day of being a very superior farmer's horse.

We saw some specimens of the Clydesdale in the North of England which pleased us much, but in the discussions of Farmer's Clubs here, we notice occasionally a vote passed for the introduction of Norman Stallions from France, to improve their agricultural breed, and we found upon the whole, that there was a more general wish prevailing to lighten the weight of their implements, and procure a more active race of horses to work them. If they do so, with proper attention to the breed, we have no doubt they will get fifty per cent. more work done on the farm, at the same cost of feed and attention which is now bestowed on the generally slow moving and unwieldy cart horses.

We think in the large Pennsylvania wagon horse, we have a breed quite equal, if not superior for our purposes, to the English cart horse. Their origin was doubtless the same, namely, Flanders; and they have undergone a refinement in our climate, and a development and increase of muscle, which we think has added to their value. This is a most excellent breed for the city dray, and indeed all heavy work upon the road and farm. We wish we could see premiums given in Pennsylvania and elsewhere for their improvement, for we have occasionally met individual specimens in that state which we thought quite perfect, and well calculated to impress their form and powers upon a numerous offspring. It is by selecting the best of a race of animals, and continually breeding from them, that has placed England so much in advance of the generality of nations in this particular, and which has added so much also to her wealth, power, and fame.

Generally speaking, we found English stables quite too warm, and have no doubt that this, together with unnatural fast driving over hard McAdam roads, are the fruitful causes of the long list of diseases, especially in the feet, to which horses here seem particularly subject. The horse is treated with too much tenderness on the one hand, and even cruelty on the other, and their whole system of nicking, docking, check reins, blinders to the bridle, curbs, and other harness paraphernalia, which we have inherited and carried to America with us, are greatly to be deprecated. In these respects we might learn many a good lesson of barbarous Russia and other nations. We mean to bring these usages and some proposed reforms to the notice of our readers hereafter.

Cultivation of Hemp.

Not being experienced hemp growers ourselves, for most of the information in this article, we are indebted to communications obtained during our residence in Russia, and a tour in Kentucky the past winter and summer, where we saw most of the operations of its culture, preparation for market, and manufacture into rope, cotton bagging, and coarse cloth. We would also acknowledge our obligations to the writings of the Hon. Henry Clay, and Judge Beatty, on this important subject; particularly the Prize Essay of the latter, read before the Kentucky State Agricultural Society.

Character and History.—Hemp, *Cannabis Sativa*, is of the natural order urticeæ according to Jussieu, or the nettle tribe of plants, and is well known for its strong tenacious fibres, and its use in various manufactures. It is of Asiatic origin, but by the enterprise of man, is now spread and cultivated more or less through the habitable globe, but especially in Russia, where, with its numerous fabrics, it has long been one of the principal exports and sources of wealth to that great and flourishing empire.

Hemp has a deep tap root, with a few fibrous ones attached to it, and the stalk grows from five even to fifteen feet high, dependent upon soil and climate. Its average height, however, on good suitable soil, is about six to nine feet, and when cultivated for a crop of lint, it springs up tall and reedy, with slight tender branches, and leaves of a nettle-like appearance, and deep sea-green color; and with its rank vegetation, pale modest flowers, and great height, waving gracefully in immense fields before a summer breeze, filling the air with fragrance, it presents one of the richest and most beautiful sights in nature. When cultivated in hills for seed, it has quite a different aspect than when grown for lint. The stalks are nearly as tall then, but much larger, and throw out thick strong branches all the way up, so that it has more the appearance of a young tree than a vegetable, in its gigantic matured growth.

Production.—Hemp produces from 5 to 12 cwt. of clean prepared lint per acre; 7 cwt. may be considered, perhaps, a good average crop. The dew rotted is worth now at Louisville, Kentucky, $3 to $4 per cwt., water rotted, $5 to $6 per cwt.; in this city, Russia clean commands from $210 to $215 per cwt., dew rotted is quite unsaleable. It is not worth while to sow it upon any land that will grow less than 50 bushels of corn per acre, and such as will produce from 70 bushels and above, is still better adapted to it. In Kentucky their best quality of land is set aside for hemp, leaving the inferior soils for corn, the smaller grains, and grass.

Hemp is not considered by many who have cultivated it, an impoverisher of the soil, inas much as by proper management, it derives most of the food necessary to its growth from the atmosphere; and by drying, rotting, and breaking it on the ground where produced, it is contended that more is returned to the soil than is taken away, and as evidence of this, it is asserted, that lands after being 13 to 19 years in hemp without a single season's cessation, gave in their last products, the heaviest and best crops; and this course can be continued till the planter is forewarned by a falling off in the yield, that the soil must be renovated before proceeding further. This is easily done by sowing it to clover and rye pastures, and then feed them off for a few seasons with stock, a longer or shorter number, as the land may demand rest and renovation. This is a very simple rotation, and may also be varied according to soil and situation, with manure, and corn, and root crops. Valuing the land at $30 per acre, and including interest on it at this rate, taxes and all other expenses, it costs about $3 to $3 50 per cwt. to raise hemp, and the growing of it when sold near home at $4 per cwt., is considered as profitable as corn at 30 cts. per bushel.

Latitude of Cultivation.—Hemp may be profitably grown in America from 35° to 42° of north latitude; we have seen it cultivated on the borders of Canada, as high up as 43°, and understand it has been tried as far south as 33° the past season. In Canada it proved, from the shortness of the season, a stunted crop, and not so valuable as most other farming products. In Mississippi it interfered with the gathering of the cotton, and upon the whole did not realise as much per acre; we may consider, therefore, that the best climate for hemp in this country, is from 37° to 40°, and in making our observations upon its culture, reference will be had more particularly to these parallels.

Soil.—The best soil for hemp is a rich light vegetable loam, of at least one foot depth; not abounding too much in sand, as that would prove too dry for a good crop in general seasons; nor should it have too great an admixture of clay, as that will prevent its pulverising and working freely, and above all make it too retentive of moisture. Fresh manured ground is not considered so good, as it generally makes too coarse a growth of the hemp; nor is newly cleared land from the forest so suitable on account of its roughness and unevenness, and such as has carried a preceding corn crop is rather to be avoided, in consequence of the roots of the stalks being somewhat in the way of cutting the hemp close, the first year of its cultivation. A grass or clover ley, especially when fed off by sheep, is greatly to be preferred; above all the clover, on account of its deep tap roots penetrating the ground, and filling it with vegetable matter, the best of all food for a hemp crop.

Preparation of Ground.—The field for cultivation should be plowed deeply in the fall or early part of winter, and left in a rough state, so as to have the benefit of the frosts, which tend materially to pulverize the ground, and make it work the more freely the following spring. This also throws open the cut worm, and most other insects which are great enemies to the hemp crop, and subjects them to be destroyed by the severity of winter. When this is done all stock ought to be shut off the field, for wherever they tread they harden the ground and make it lumpy. In performing the fall operation, some even trench the ground, which is easily done by letting a sub-soil plow follow in the same furrow directly after the common plow. If this be not at hand, a common plow will answer nearly the same purpose as a sub-soil plow, by taking off the mould board and leaving the point of the share alone to do the work.

If the soil prove friable and work freely, one plowing and one good harrowing will be sufficient in the spring, if not, it will require two, for it is very essential that the tilth be well pulverised and fine.

Time of Sowing.—Hemp will not stand hard frosts, and the 10th of April, therefore, is considered as early as it may be safely sowed to ensure a good growth; fair crops have been realised sown as late as the 10th of June; but this is precarious, and the best time in ordinary seasons, is considered to be from the 1st to the 15th May, when the earth has become well warmed and vegetation shoots rapidly. On fresh sod ground, where worms and insects are feared, it might be safe to put off sowing till the 20th of May; and in putting in the crop, if a large one, it is necessary to vary the time a little, so as not to have it all ripen at once, as this would make it quite impossible with an ordinary set of hands, to secure it properly, and much loss would consequently ensue.

Quantity of seed per acre and Manner of Sowing.—Fresh seed and such as has been grown the preceding year, is indispensable, as there can be no certainty of older seed vegetating. The new seed may be easily distinguished from the old, by being found heavier in weight and of a bright red color. The amount used is from 5 pecks to 2 bushels per acre. If the land be in good condition, the first quantity is sufficient, if not, more must be used according to the judgment of the sower. It is safe, however, to err in sowing too much seed rather than not enough; for if too many plants vegetate, the weaker are smothered by the strong, and no more are left to grow than are sufficient to make a good crop. It is usual to sow broadcast, but we think such a drill as is used in this state for sowing plaster and small seeds, would be preferable, for with one of a 12 to 16 feet box, a person would put in 12 to 15 acres per day easily, and at a greater economy of seed, and more evenly than could be possibly done by hand.

After sowing, harrow in both ways, and then brush the land smooth and roll it. The great benefit of rolling is, that it presses the earth well over the seeds, and the better ensures their vegetation, and what is quite as essential, it leaves the ground smooth, so that the hemp can be cut down close to it. The nearer the root is approached in cutting, the heavier the lint; and it is said that three inches more or less of stalk saved near the ground, makes a difference in yield of at least half a hundred weight per acre, which amply pays for smoothing the surface of the ground, and has other advantages in spreading out the hemp to dry upon it, and secures a greater evenness in rotting. If the ground becomes sufficiently hard and crusty on top after rolling to endanger the crop coming up evenly, it is recommended to harrow it with a very fine single horse harrow, in order to loosen the earth, and again roll it after the hemp has appeared a few days. If a moderate rain falls soon after sowing, it will be very fortunate and ensure a rapid and even vegetation. If the ground happen to be very dry at the time of sowing, the seed should be put in with shovel plows, covering it deep enough to ensure moisture sufficient for vegetation; it should then be harrowed and rolled.

(To be continued.)

THE NEW BRITISH TARIFF.

Duties of Customs payable on Goods, Wares, and merchandise, imported into the United Kingdom from foreign parts.

Wheat.—Whenever the average price of wheat, (made up and published in the London Gazette, for six weeks,) shall be for every quarter of 8 bushels—

	£	*s.*	*d.*
Under 51s. the duty shall be for every quarter	1	0	0
51s. and under 52s	0	19	0
52s. and under 55s	0	18	0
55s. and under 56s	0	17	0
56s. and under 57s	0	16	0
57s. and under 58s	0	15	0
58s. and under 59s	0	14	0
59s. and under 60s	0	13	0
60s. and under 61s	0	12	0
61s. and under 62s	0	11	0
62s. and under 63s	0	10	0
63s. and under 64s	0	9	9
64s. and under 65s	0	8	0
65s. and under 66s	0	7	0
66s. and under 69s	0	6	0
69s. and under 70s	0	5	0
70s. and under 71s	0	4	0
71s. and under 72s	0	3	0
72s. and under 73s	0	2	0
73s. and upwards	0	1	0

Barley.—Whenever the average price of Barley, made up and published in the manner required by law, shall be for every quarter—

	£	*s.*	*d.*
Under 26s. the duty shall be for every quarter	0	11	0
26s. and under 27s	0	10	0
27s. and under 30s	0	9	9
30s. and under 31s	0	8	0
31s. and under 32s	0	7	0
32s. and under 33s	0	6	0
33s. and under 34s	0	5	0
34s. and under 35s	0	3	0
36s. and under 37s	0	2	0
37s. and upwards	0	1	0

Oats.—Whenever the average price of oats, made up and published in the manner required by law, shall be for every quarter—

	£	*s.*	*d.*
Under 19s. the duty shall be for every quarter	0	8	0
19s. and under 20s	0	7	0
20s. and under 23s	0	6	0
23s. and under 24s	0	5	0
24s. and under 25s	0	4	0
25s. and under 26s	0	3	0
26s. and under 27s	0	2	0
27s. and upwards	0	1	0

Rye, Peas and Beans.—Whenever the average price of rye, or of peas, or of beans, made up and published in the manner required by law, shall be for every quarter—

	£	*s.*	*d.*
Under 30s. the duty shall be for every quarter	0	11	6
30s. and under 33s	0	10	6
33s. and under 34s	0	9	6
34s. and under 35s	0	8	6
35s. and under 36s	0	7	6
36s. and under 37s	0	6	6
37s. and under 38s	0	5	6
38s. and under 39s	0	4	6
39s. and under 40s	0	3	6
40s. and under 41s	0	2	6
41s. and under 42s	0	1	6
42s. and upwards	0	1	0

Wheat, Meal and Flour.—For every barrel, being one hundred and ninety-six pounds, a duty equal in amount to the duty payable on thirty-eight and a half gallons of wheat.

Oatmeal.—For every quantity of one hundred and eighty-one pounds and a half, a duty equal in amount to the duty payable on a quarter of oats.

Maize or Indian Corn, Buckwheat, Bear, or Big.—For every quarter, a duty equal in amount to the duty payable on a quarter of barley.

If the produce of and imported from any British possessions in North America, or elsewhere out of Europe.

Wheat.—Whenever the average price of wheat, made up and published in the manner required by law, shall be—

	£	*s.*	*d.*
Under 55s. for every quarter, the duty shall be for every quarter	0	5	0
55s. and under 56s	0	4	0
56s. and under 57s	0	3	0
57s. and under 58s	0	2	0
58s. and upwards	0	1	0

Barley.—Whenever the average price of barley, made up and published in the manner required by the law, shall be—

	£	*s.*	*d.*
Under 28s. for every quarter, the duty shall be for every quarter	0	2	6
28s. and under 29s	0	2	0
29s. and under 30s	0	1	6
30s. and under 31s	0	1	0
31s. and upwards	0	0	6

Oats.—Whenever the average price of oats, made up and published in the manner required by law, shall be—

	£	s.	d.
Under 22s. for every quarter, the duty shall be for every quarter	0	2	0
22s. and under 23s	0	1	6
23s. and upwards	0	0	6

Rye, Peas, and Beans.—Whenever the average price of rye, or of peas, or of beans, made up and published, in the manner required by law, shall be—

	£	s.	d.
Under 30s. for every quarter, the duty shall be for every quarter	0	3	0
30s. and under 31s	0	2	6
1s. and under 32s	0	2	0
32s. and under 33s	0	1	6
33s. and under 34s	0	1	0
34s. and upwards	0	0	6

Wheat, Meal, and Flour.—For every barrel, being one hundred and ninety-six pounds, a duty equal in amount to the duty payable on thirty-eight and a half gallons of wheat.

Oatmeal—For every quantity of one hundred and eighty-one pounds and a half, a duty equal in amount to the duty payable on a quarter of oats.

Maize, or Indian Corn, Buckwheat, Bear or Bigg.—For every quarter, a duty equal in amount to the duty payable on a quarter of barley.

Articles.	*Of or from For. Countries.* £	s.	d.	*Of or from Brit. Poss.* £	s.	d.
Apples, raw, bushel	0	0	6	0	0	2
" dried,	0	2	0	0	2	0
Bacon, cwt.	0	14	0	0	3	6
Beef, salted, not being corned beef,	0	8	0	0	2	0
" fresh, or slightly salted, barrel	0	8	0	0	8	0
Beeswax, cwt.	0	2	1	0	1	0
" bleached,	1	0	0	0	10	0
Bones of cattle and other animals, and of fish, (except whale fins) whether burnt or unburnt, or as animal charcoal, ton	0	0	6	0	0	6
Butter, cwt.	1	0	0	0	5	0
Calves, each	0	10	0	0	5	0
Candles, Spermaceti, pound	0	0	6	0	0	6
" Tallow, cwt.	0	10	0	0	10	0
Cheese,	0	10	6	0	2	6
Cider, tun	10	10	0	10	10	0
Colts,	1	0	0	0	10	0
Copper, Ore of, not containing more than 15 parts copper, per ton of metal,	3	0	0	1	0	0
" Containing not more than 20 ditto,	4	10	0			
" Containing more than 20 ditto,	0	7	6			
Copperas, blue, green and white, ton	1	0	0	0	10	0
Cows, each	0	15	0	0	7	6
Cranberries, gallon	0	0	1	0	0	1
Cucumbers, Preserved,	10 per ct.			5 per ct.		
Eggs, 120	0	0	10	0	0	2½
Foals, each	1	0	0	0	10	0
Fruit, Raw, not otherwise enumerated,	5 per ct.			5 per ct.		
Gypsum, ton	1	11	8	0	1	3
Hams and Bacon,	0	14	0	0	3	6
Hay, load	0	16	0	0	8	0
Hemp, Dressed,	0	4	2	0	2	0
" Rough, or Undressed, or any other vegetable substance of the nature and quality of undressed hemp, and applicable to the same purposes, cwt.	0	0	1	0	0	1
Honey,	0	10	0	0	5	0
Hogs, each	0	5	0	0	2	6
Hops, cwt.	4	10	0	4	10	0
Horses, each	1	0	0	0	10	0
Lambs,	0	2	0	0	1	0
Lard, cwt.	0	2	0	0	0	6
Lead, Ore of, ton	0	10	0	0	2	0
" Black, Pig and Sheet,	1	0	0	0	5	0
" Red,	1	10	0	0	15	0
" White,	2	5	0	0	2	6
Manure, not otherwise enumerated or charged with duty, ton	0	0	6	0	0	6
Mares each	1	0	0	0	10	0
Meat, Salted or Fresh, not otherwise described, cwt.	0	8	0	0	2	0
Mules, each	0	2	6	0	1	3
Oil, Animal, Raw, not otherwise enumerated, cwt.	0	1	3	0	1	3
" Linseed, Rape, Hemp, tun	6	0	0	1	0	0
" Olive,	2	0	0	1	0	0
" Seed, not otherwise enumerated or described, tun	6	0	0	1	0	0
" Or Spirit of Turpentine,	0	5	0	0	2	6
Pears, Raw, bushel	0	0	6	0	0	3
" Dried,	0	2	0	0	2	0
Pickles of all sorts, including the vinegar, and not otherwise enumerated, gallon	0	1	6	0	0	9
Pigs, Sucking, each, each	0	2	0	0	1	0
Plaster of Paris, ton	1	0	0	1	0	0
Pork, Salted, (not Hams) cwt.	0	8	0	0	2	0
Pork,, fresh,	0	8	0	0	2	0
Potatoes,	0	0	2	0	0	1
Poultry,	5 per ct.			2½ per ct.		
Plants, Shrubs, and Trees alive,	Free					
Puddings and Sausages, pound	0	0	3	0	0	1
Quills, Goose, thousand	0	0	6	0	0	3
" Swan,	0	3	0	0	1	6
Quinces,	0	1	0	0	1	0
Rice, not rough, nor in the husk cwt.	0	6	0	0	0	6
Rice, rough and in the husk, quarter	0	7	0	0	0	1
Seed (Oil) Cake	0	1	0	0	1	0
Grass of all sorts, not particularly enumerated or otherwise charged with duty, cwt.	0	5	0	0	2	6
All other seeds not particularly enumerated or described, or otherwise charged with duty, commonly used for expressing oil therefrom, quarter	10 per ct.			5 per ct.		
Garden Seeds, not particularly enumerated or described, or otherwise charged with duty, pound	0	0	1	0	0	1
Sheep, each	0	3	0	0	1	6
Silk, Raw, pound	0	1	0	0	0	6
Thrown, not dyed, viz :—Singles,	0	1	0	0	0	6
Manufactures of Silk, or of silk and other materials, or articles of the same, wholly or in part made up, not particularly enumerated, or otherwise charged with duty,	30 per ct.			30 per ct.		
Silkworm Gut,	20 per ct.			20 per ct.		
Deer Skins, Undressed, skin	0	0	1	0	0	0½
Spermaceti, Fine, ton	25 per ct.			25 per ct		
Spirits or Strong Waters, not the produce of any British possessions, and not being sweetened spirits mixed with any article, so that the degree of strength thereof cannot be exactly ascertained by such hydrometer, gallon	1	2	6	——		
Starch, cwt.	0	10	0	0	5	0
Stone and Slate, hewn, ton	0	10	0	0	1	0
" Marble, sawn in slabs or otherwise manufactured, cwt.	0	3	0	0	1	6
Sugar and Molasses, until 5th July, 1843, viz :—Brown or Muscovado, or Clayed Sugar, not being refined, cwt.	3	3	0	——		
" Maple, if accompanied with a certificate of its being the produce of a B. P. cwt.	——			1	4	0
" If not accompanied by such certificate,	3	3	0	——		
Swine, each	0	5	0	0	2	6
Tallow, cwt.	0	3	2	0	0	3
Tar, per last, containing 12 barrels, each barrel not exceeding 31½ gallons,	0	2	6	0	0	6
Tobacco, Unmanufactured, pound	0	3	0	0	3	0
" Snuff,	0	6	0	0	6	0
" Manufactured, or Segars,	0	9	0	0	9	0
Tongues, cwt.	0	10	0	0	2	6
Turpentine, viz :—Not being of greater value than 9s. per cwt.	0	0	1	0	0	1
" From 9s. to 15s. per cwt.	0	1	0	0	0	3
" Above 15s. per cwt.	0	5	0	0	2	6
Vegetables, not enumerated or described,	5 per ct.			2½ per ct.		
Vinegar, tun	18	18	0	18	18	0
Walnuts, bushel	0	2	0	0	2	0
Wax, Bees', cwt.	0	2	0	0	1	0
" " in any degree bleached,	1	0	0	0	10	0
Timber of Wood—Not being deals, battens, boards, staves, handspikes, oars, lathwood, or other timber or wood, sawn, split or otherwise dressed, except hewn, and not being timber or wood otherwise charged with duty, from and after the 10th October, 1843, the load of cubic ft.	1	10	0	0	1	0
Timber or Wood—From and after the 10th October, 1843,	1	5	0	0	1	0
——Deals, battens, boards, or other timber or wood, sawn or split, and not otherwise charged with duty, from and after the 10th October, 1842, until the 10th October, 1843, the load of cubic feet	1	18	0	0	2	0
" From and after the 10th October, 1843,	1	12	0	0	2	0
Handspikes, not exceeding 7 feet in length, the 120	1	0	0	0	0	6
" Exceeding 7 feet, the 120	2	0	0	0	1	0
Hoops, not exceeding 7½ feet in length, thousand	0	2	0	0	0	4
" Not exceeding 9 feet in length, thousand	0	3	0	0	0	6
" Exceeding 9 feet in length, thousand	0	5	0	0	1	0
Knees, under 5 inches square, the 120	0	10	0	0	0	3
" 5 inch and under 8 inch,	2	0	0	1	0	0
Lath Wood, per fathom, 216 cubic feet,	2	0	0	0	1	0
Oars, the 120	7	10	0	0	3	9
Spars or Poles, under 22 feet in length, and under four inches in diameter, the 120	1	0	0	0	0	6

	£	s.	d.	£	s.	d.
" 22 feet in length and upwards, and under 4 inches in diameter.............the 120	2	0	0	0	1	0
" All lengths, 4 inches and under 6 inches in diameter,..............................	4	0	0	0	2	0
Spokes for wheels, not exceeding 2 feet in length,.........................thousand	2	0	0	0	1	0
" Exceeding 2 feet in length,...........	4	0	0	0	2	0
Billet or Brushwood, used for stowage, £100 value	5	0	0	0	5	0
Cotton Wool, or waste of cotton wool, cwt.	0	2	11	0	0	1

Remarks.—There is an additional duty added to the above of 5 per cent.

The *pound sterling* is estimated by our own government at $4 84, and as there are 240 pence in a pound, the *penny* may be taken for *two cents* nearly, United States currency.

The highest duty on Flour, (the barrel being estimated at 38½ gallons of wheat,) imported from the United States, is $2 78; and on Colonial 69 cents, the duty being more than four times as much on the former as is charged on the latter. But this does not fully show the difference in favor of Colonial flour, as it will be perceived by the foregoing table, that while the duty on grain and flour from the United States, is reckoned from the average price of 51*s*. per quarter and under, to 73*s*. and upwards, the Colonial is reckoned only between 55*s*. and under to 58*s*. and upwards; consequently, whenever the price averages 58*s*. and over, it is admitted at 1*s*. per quarter, from the Colonies, while from the U. States, at 58*s*. it pays a duty of 14*s*.; from which point it slowly recedes till it reaches the minimum at 73*s*. which is scarcely ever attained in the English market. Again: while the Colonies pay no duty above 5*s*. which is reached at the average price of 55*s*. the States pay a duty of 17*s*. on this average, which is increased to 20*s*. when the average recedes to 51*s*. and under. This deceptive sliding scale has been so adroitly graduated by British statesmen, from a knowledge of its practical working for the last 50 or 100 years, that it effectually secures to the Colonies a market at all times accessible at very low duties, while to the citizens of our own country, it amounts almost to a prohibition, at all times. The present duty, though nominally reduced from the former, about 50 per cent. at its maximum, yet it is so discreetly arranged for the protection of the Home and Colonial Agriculturist, as to afford nearly the same result in the average duties levied on the exportations from the U. States.

By Mr. Gladstone's bill, passed by the late English Parliament, and approved by the Sovereign, July 16, 1842, entitled "The Provisions Abroad Bill," all flour imported into the British possessions after July 5th, 1843, will pay a duty of 2*s*. sterling, and salted provisions 3*s*. sterling per cwt.

Wheat, without further regulation, will continue to be admitted free, on condition that it is consumed in the Provinces. But it is perfectly evident to us, that it is no part of the policy of the British government, to shut out trade from this country through their Canadian possessions. She intends making them the conduit, by which our luxuriant Western harvests are to be drained off to supply her artisans at home, (who are more profitably employed than in raising their own provisions,) till they have become sufficiently advanced to furnish supplies from their own luxuriant fields. To what other motive is to be attributed the alleged loan of £5,000,000 from the *British Government* to the Canadian authorities, for the construction of their splendid lines of canals, connecting the detached points of their inland navigable waters, so as to admit the ready passage of an ocean steamer, full freighted from the docks at London or Liverpool, to the farthest point now reached by the water craft of our inland seas? What a contrast this far reaching policy of England's statesmen furnishes to some of our petty Solons, mousing around the scanty crumbs of an almost empty treasury, while a bolder and more liberal policy would fill their coffers with wealth! Soon we may see the vessels of Bristol and Glasgow, discharging their full cargoes at Chicago and the Sault St. Marys, while they kindly relieve our American shipping from the trouble of bringing down the rich products of the West.

To relieve our readers of any doubts on this most important subject, we quote briefly from a dispatch forwarded by Lord Stanley to Sir Charles Bagot, dated Aug. 17, which has but this moment met our eyes. He says—

"Her Majesty's Government desire to observe, that, under the 37th and 38th clauses of the Possessions act, 3 and 4, William IV. c. 59, which are unrepealed by the act of this session, *any article may be entered, at any of the frontier ports of Canada, without payment of duty, and may be delivered to be passed on to one of the warehousing ports, under bond for the due arrival and warehousing of such goods at such port.* The existing exemptions would relieve parties from the observance of those regulations, and from any charge attending their fulfilment, in respect to the articles to which they apply. *Her Majesty's Government, however, question whether these exemptions ought not to be extended to other articles besides flour and salt meat; and they think, that if the St. Lawrence is really to compete with the Erie canal, the freedom which it offers should extend to all articles, embraced by the export trade of the agricultural States of the West, and not merely to a selection from any of them.*

"If, therefore, it should appear of more importance to the inhabitants of Canada, *to retain, or to receive and extend the power of transmitting the produce of the*

United States, without the restrictions of the bond now required, down the St. Lawrence, than to enjoy the privilege of exporting their produce to other British colonies, with such advantages as the differential duties, imposed under the new act, may afford them, Her Majesty's Government have no desire to place the commerce of Canada, by Imperial legislation, under restrictions, farther than as they are required, by a due regard to the rights of the inhabitants of the other possessions of the crown; and therefore, they *would readily consider the expediency of proposing to Parliament, to remove the duties now laid on the introduction of flour, salted meat,* AND ANY OTHER ARTICLE OF AGRICULTURAL PRODUCE INTO CANADA, at the same time, however, placing the same articles, when exported from Canada to the other colonies, upon the footing, with respect to duty, of foreign produce, at the Custom Houses of those colonies, and requiring proof of their privileged admission into the country.

"Her Majesty's Government are most willing, independently of the suggestion which has been just made, *to entertain any plan for giving farther facilities to the transit of the produce of the United States, by way of the St. Lawrence, in case it should be considered that a system of branding packages, or any other mode, would be more simple and satisfactory for the purposes of commerce than a compliance with the provisions of the present law.*

The statesman who can fail to perceive the drift of England, shadowed forth in the above exponent of their policy, is only fitted to draw instruction from his horn book.

We will only add that *Wheat* is admitted free of duty in all the British Possessions of N. America.

Flour is admitted free, in Upper and Lower Canada, while in New Brunswick and Nova Scotia, it pays a duty of 5*s. sterling* per bbl.

In the British West Indies, it pays both an Imperial and Colonial duty; the first fixed and regulated by the Home Government; the latter fluctuating, and dependent solely on the whim or caprice of the members of the Local Legislation.

Value of a Home Market.—We clip from an exchange paper the following list of articles consumed by a single manufacturing state, which shows very conclusively where our western products will find a satisfactory market, if our manufacturers are sufficiently protected.

"Massachusetts is a manufacturing state. Her population, in round numbers, is 700,000. In a single year that state purchases and consumes enough of the products of the soil, &c., to require the expenditure of $42,000,000. The following are the items of expenditure:

Cotton,	185,000 bales,	$7,200,000
Flour,	620,000 bbls.	4,100,000
Corn and other grain,	3,730,000 bush.	2,790,000
Coal,	175,000 tons.	1,300,000
Wood,	188,600 cords,	1,300,000
Wool,	8,000,000 lbs.	3,200,000
Lumber of all kinds,		3,690,000
Amount carried forward,		$23,580,000
Amount brought forward,		$23,580,000
Leather and hides,		7,600,000
Beef, pork, hams, and lard,		2,800,000
Butter and cheese,		1,000,000
Horses, cattle, sheep, and swine,		600,000
Potatoes,		300,000
Poultry of all kinds,		70,000
Pig lead,		1,450,000
Furs, buffalo robes, &c.,		45,000
Rags, junk, &c., for paper,		965,000
Lime	8,299 casks,	72,000
Pot and pearl ashes,	500 tons,	58,000
Tobacco,	960 hhds.,	68,000
Rice,		325,000
Tar, pitch, and turpentine,		1,200,000
Iron,		800,000
Sugar and molasses,		47,000
Staves, casks, boxes, &c.,		360,000
Domestic spirits and beer,		100,000
Feathers, hair, and bristles,		185,000
Oysters, venison, sand, sweet potatoes, summer fruit, such as peaches, melons, &c.,		210,000
Hay, grass seed, flax seed, flax linseed oil, castor oil, beans, beeswax, tallow, onions, nuts,		175,000
		$42,010,000

"We have no statistics referring to the consumption of other manufacturing districts, but it is known that other states of the Union manufacture almost as much as Massachusetts—possibly more. If adequate *protection* were extended to domestic industry, manufactories would multiply and extend themselves, employing millions of idle capital, and bringing into requisition the services of thousands of idle citizens; so that in a few years, the western and southern planter would find, at his very door, as it were, an adequate market for all his surplus supplies. The advantages of a home market over a foreign one, are apparent to all minds, and therefore do not need elucidation."

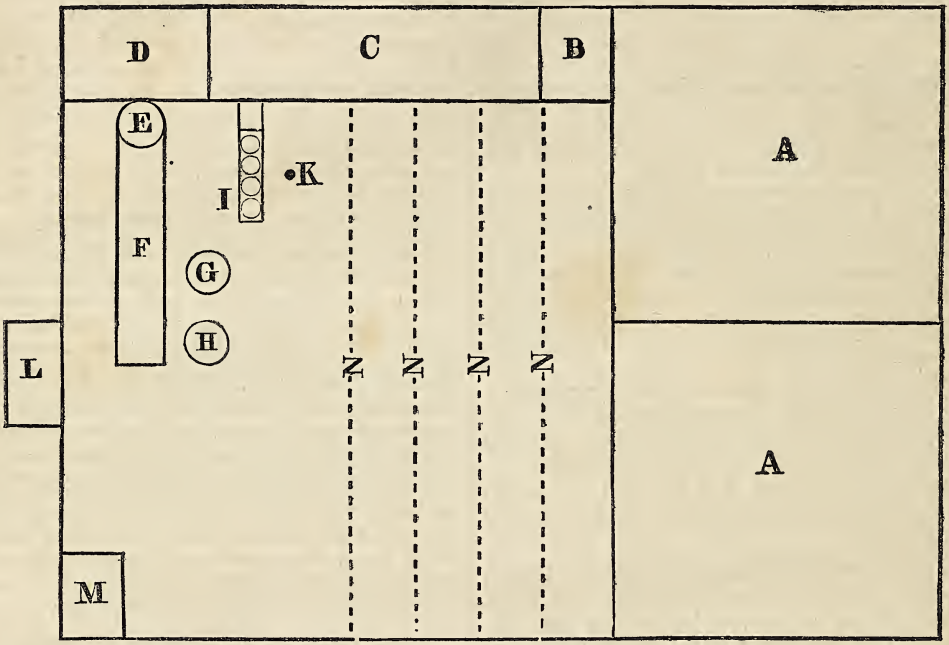
THE PORK BUSINESS OF THE WEST.

Few of our readers, if they have never crossed the valley of the Ohio, penetrated the Wabash, and stood on the banks of the Upper Mississippi, can have even a faint idea of the fertile corn region which stretches out here in almost boundless magnificence, and of the immense herds of swine that are reared to consume it. The census for 1839 gives to the four states of Kentucky, Ohio, Indiana, and Illinois alone, nearly eight millions of swine, and we suspect this is rather under than above their real number. But from this data it will be seen what an extensive business the rearing and fattening of pork has already become in the West, even with its present sparse population; what then must it be, when the whole of this immense valley comes to be put under a high state of cultivation!

Wherever one passes through the towns and villages, on the canals and rivers, he sees large slaughtering and packing establishments; and on the roads, in almost every direction, from November till the last of January, he meets droves after droves of swine, blocking up the way with their bulky proportions, and puffing and shouldering clumsily along, leading the astonished traveller to infer, that the fields and forests on his route are absolutely swarming with fat grunters.

Cincinnati is the greatest point for killing and packing in the West, and as the establishments for these purposes are on a large scale, and considered quite a curiosity, we were prevailed upon to visit them. But before entering upon a description, for the better understanding of the subject, we give a ground plan of a slaughtering establishment

Slaughter House.—(Fig. 21.)



A A, pens for hogs driven in from the country, which can be added to at pleasure. B, sloping platform, up which they are driven as fast as wanted, to be slaughtered, into the killing pen, C. C, killing pen. D, slatted platform, to which the hogs are drawn after stuck, to bleed. K, pump. I, kettles for heating water, with furnace beneath. E, large kettle for scalding the hogs. F, a long dressing table. G, warm water. H, cold water. L, recess for stripping off fat from the offals, &c. N N N N, beams with hooks in them, from which the animals when dressed are suspended to cool. M, counting room.

As we entered this, we found at the end of the building marked C, that the animals were driven in as close crowded as possible, and were now rapidly knocked down and stuck, and then hauled on to the grating, to bleed and cool at D. From this they were thrown by the half dozen into the huge scalding kettle E, where after lying a minute or so, they were swung out on to the platform F, and then immediately dressed and hung up by the hind legs close by. The offal was next taken out, and the animal dashed down and neatly cleaned off with cold water, and then carried away and suspended from the numerous beams, N N N N, the sides pressed open with sticks, and so kept for a day or two, till sufficiently dried, cooled and stiffened, for good packing.

The celerity of the operations was more rapid than we can write, and presented a scene which we shall not readily forget. The whole building was covered with blood, and the men engaged there, stained and bespattered with it from top to toe. We never saw so ferocious a looking band; and as they moved swiftly about in their murderous work, in bloody overhauls, leather aprons, short tucked up frocks, turbaned heads, and bare blood-stained arms, flourishing long sharp knives in their hands, they reminded us more of the diabolical sansculottes of the massacreing scenes of the French revolution, than any thing else of which we ever heard or read. Heaps of offal lay outside, and carts were passing to and fro, carrying it off for manure, while from beneath the building, down a deep ravine, ran out a bloody stream, as if an army had been slain to feed its bubbling course. We did not get over the appalling sight for months, and it would be no small temptation that should ever induce us to enter a slaughter house again.

At the packing houses there is nothing disagreeable, and we visited them with pleasure. After getting thoroughly cool, generally the second day from killing, the hogs are brought here, and cut up and salted, and barreled into pork, or prepared for bacon, as is most desirable, and the lard taken out to be pressed into kegs, or manufactured into oil and candles. And here a pig is prepared to be cured with even more despatch and scientific skill than he is killed and dressed.

Two men take their positions on opposite sides of a large cutting block, each armed with a cleaver and knife, while two others stand by with hooks, to throw the animals up as fast as wanted. At the word of command, "Hog up," these last swing him on to the block. "Head off," cries the most adroit cutter, and down comes the cleaver, and at one stroke it is done. "Turn him over," is the next order, and three strokes divide the carcase in length through the back bone. Each of the cutters now goes to work with his half. One blow with the cleaver, for each leg below the knee, or gambol joint; one belly cut with the knife, and the fat is peeled off; then six more, each one with their cleavers, dispatches the sides for barreling; the hams and shoulders being taken away to be trimmed, and the hog is finished at twenty two strokes, about as fast as one can count. In addition to the cutters and their two aids, a sufficient number of persons are employed at the same time there, to bring the hogs to the cutting block, and salt the meat, and try out the lard, as fast as prepared.

The packing houses of Cincinnati are generally large, substantial brick buildings, with every thing ample and complete within and without. The cutting up and salting, and pressing out the lard is done on the first floor; the deep cool cellars are appropriated to the storage of the lard, and pickling hams and shoulders. Here also is the furnace for the fire, while overhead, all the way to the roof, the smoke-house is partitioned off from the other rooms of the building, where a proper number of posts and slats, and beams in tiers, are arranged over each other, for the purpose of suspending the pieces to be smoked.

To give an idea of the capacity of one of these houses for the business, the intelligent proprietor informed us, that 1500 hogs could be cut up in a single day, 800,000 lbs. of bacon could be smoked at a time, and 4,000,000 lbs. within a season of about three months.

During the season ending February, 1839, not less than 210,000 hogs were cut up at Cincinnati, averaging 175 lbs each, and making 36,750,000 lbs. In 1840, 150,000 heads, averaging 210 pounds each, and making 31,500,000 lbs. The numbers since this have been somewhat lessened; that of 1842, was supposed to be not over 110,000 hogs. Various causes are assigned for this falling off in Cincinnati, such as the low price of pork, not making it sufficiently tempting to bring it, in some instances, to market; rival packing establishments built up in the country; and an unusual number of hogs driven over the mountains, for a higher price at the Eastern markets.

The business of purchasing and packing, for the three past years, has been ruinous to many engaged in it; for the market during this time has been constantly falling, and neither buyer or seller could make any calculations in reference to it. But we think pork has now reached its lowest price. It will not be the all engrossing product as heretofore, when it brought such high prices, and since the reduction of duty upon it in England, larger quantities will be exported hereafter; and by the late regulation of our own tariff, our artisans and mechanics will be on the increase and more fully employed; so that the market for pork, both at home and abroad, is likely to undergo a gradual improvement the coming season. Another great reason why the price of pork should improve, is that lard now in large quantities is manufactured into oil and candles, making it a profitable business to try up whole animals, if very fat, for this purpose, without reserving any part of them for pork or bacon. We trust that the present low price of pork will increase the spirit of improvement among our farmers in the breeds of their swine, rather than slacken it; for when the article is low, the more pains should be taken to cheapen its production, by adopting a superior animal, which again will be likely to increase the consumption; for the better the meat, the more there will be eat of it, and the less of other things.

Protection of Coarse Wool.

We have had numerous enquiries and complaints as to the supposed inadequacy of our present tariff, for the effectual protection of our coarse wools. In reply, we beg leave to say, there is a practical working in matters pertaining to the imposts levied on articles imported into this country from abroad, whether coming into competition with home productions or not, that frequently disappoints popular expectation, and differs in toto from the theoretical notions and cherished principles of the political economist. The opinions, therefore, of a practical man, who is thoroughly conversant with the effect of certain rates of duty, on any article, are particularly desirable.

When the present tariff was under discussion in the House, there was an intelligent and influential delegation of wool growers, whose information and opinions were fully considered, and to a great extent, incorporated into the bill. This tariff has been in operation only four months, and its effects, as yet, cannot be determined. Our farmers do not expect even a crop of wheat within so short a time, much less a fruit-bearing orchard.

We all know how easy a thing it is to destroy property, credit, currency, trade, and prosperity; and we know equally well, the difficulty and delay in restoring it. Confidence, it is justly said, is a plant of slow growth, and those who have unfortunately lost it, must not only diligently use the means, but patiently abide the time of its restoration. Prices have fallen, ruinously fallen, and every farmer and artisan in the United States is suffering from the general derangement and depreciation. The tariff, if maintained in its general scope with such modifications as may be found expedient, will unquestionably restore things to their wonted condition; especially if Congress adds to it, a safe, sound *National Currency.* But its progress without this other powerful aid, will be slow though sure. Time, however, is requisite to give it full effect. The manufacturers of our country have been so often misled by a vascillating policy on the part of our Government, that they have become wary of embarking capital, when the uncertainties of protection are so great. But let it once be understood, that *protection to American industry*, at least for revenue, is the settled policy of this Union, and the hum of the spindle will be heard from Maine to Louisiana, and from the Atlantic to the Upper Mississippi, and the planter and the farmer may then rely on a steady demand for all their products, and at remunerating prices.

On the subject of wool, especially *coarse* wool, we shall take the opinion of the Hon. Horace Everett, of Vermont, now a member of Congress, and a sound headed, practical, intelligent man, who has given much attention to this subject. He says:

“None but *coarse* wool, costing 7 cents and under, is admitted under the 5 per cent. duty. The term *coarse* will exclude Merino Wool of all grades, and the best of the staples of the native wool: it was intended, particularly, to meet the mixed grades imported from Buenos Ayres. Another amendment provided that if wool of different kinds was imported in different bales, but in the same invoice and at the same price, the ad-valorem duty should be levied on the whole according to the value of the best bale. It had been practiced to import five kinds of wool in separate bales, but at the same price, viz. the average price of the whole. This enabled the importer to enter the whole at a price under 8 cents. But under these two amendments, all felting wool will be excluded from admission under the 5 per cent. duty.

The coarse long wool, used principally for blankets and carpets, does not very materially compete with any portion of our wool. The short felting wools, though *coarse*, do in some degree compete with a portion of ours. They are used in the manufacture of satinets and negro cloths. There are, however, two considerations to oppose to this competition. The first is, that if coarse long wool was excluded, the manufacturers' articles would come in, in their place; and the second is, that it is necessary to yield something to other interests to strengthen our own.

We were alarmed at the great importation of felting wool in 1841, from Buenos Ayres, under 8 cents, and free of duty. The average prices before referred to, and the low prices there, occasioned by a long blockade, alone enabled the importers thus to import it, and I assert my belief that, hereafter, no wool that our manufacturers will use for making felted cloths, can be imported from that place as low as 7 cents:—nor even under 10 cents.

By another amendment a *specific duty of* 3 *cents per pound was added to the ad valorem duty.*

The effect of all these amendments will be to raise the duties on the low priced fine wools, and including most if not all the felting wools from Buenos Ayres, as follows:

On wool	costing	4	cents	per lb.	121	per cent	*duty.*
“	“	5	“	“	103	“	“
“	“	6	“	“	90	“	“
“	“	7	“	“	82	“	“
“	“	8	“	“	78	“	“
“	“	9	“	“	71	“	“
“	“	10	“	“	67	“	“

The duties in addition to the protection afforded by the charges of importation will, in my opinion, be an ample protection against the low priced wools from Buenos Ayres, or from any other quarter. The question is, to what point can this foreign competition reduce the price of our wool—at what price per pound can wool of a staple equal to ours be imported?

The items which compose the cost of importation, are

1. The price per pound,
2. 3 per cent. commission,
3. 2 cents per pound for freight, and other charges on the freight,

} On these the ad valorem duties are assessed.

4. 1 per cent. insurance.
5. 3 per cent. for six months interest on cost, from the the time of the order of purchase to the time of sale.
6. 10 per cent. profit on cost, charges and duties.

These are stated as the average rates.

Another very important fact is, that the Buenos Ayres wool is imported in so foul a state that it takes two pounds to equal one pound of ours, as washed on the sheep. Our wool loses, in cleansing, one-third of its weight:—the Buenos Ayres wool loses two thirds; in other words, it takes 1½ pounds of our wool as washed on the sheep to make 1 pound of cleansed wool; while it takes 3 pounds of Buenos Ayres wool, as imported, to make 1 pound of cleansed wool. The question, then is, at what prices can 2 pounds of this wool be imported? The following is the answer, for wool costing from 4 to 10 cents:

		charges.		duties.		cost of 1 lb.		cost of 2lb.	
	cts.	cts.	mills.	cts.	mills.	cts.	m.	cts.	m.
Cost of 1lb.	4	3	4	4	9	12	3	24	6
"	5	3	6	5	2	13	8	27	6
"	6	3	8	5	5	15	3	30	6
"	7	4	0	5	8	16	8	33	6
"	8	4	2	6	1	18	3	36	6
"	9	4	4	6	4	19	8	39	6
"	10	4	7	6	7	21	4	42	8

But the question may be asked, how does it happen that the price of Buenos Ayres wool is now so low?

It is quoted in the Boston market at from 7 to 10 cents. The answer is, that what remains for sale is probably of the poorer qualities—was purchased during the blockade, at low prices, and was imported free of duty, and is sold without a profit, if not at a loss. The same general causes which have depressed the price of our own wool, have affected the price of all foreign wool in our market. These general causes may afford the subject of another letter.

I have thus far restricted myself to the consideration of the tariff, as a protective against low priced foreign wools—and more particularly against those from Buenos Ayres. I will add further, that it is most probable, under the present tariff, that none but *coarse* wool will be imported from that place in the state heretofore imported, but will be first cleansed. The three pounds of foul wool will be reduced to one pound of cleansed wool—to avoid the 3 per cent duty; paying it on one pound instead of paying it on three pounds. This wool, however, will never be equal in value to ours, or other foreign wool of the same fineness. It is not suited to make broadcloths, because it cannot, on account of the burrs with which it is filled, be stapled either before or after they are picked out.

The fine wools imported from Europe and Australia into our ports, were entered in 1840, at from 33 to 34 cents per pound. The fleeces, however, are cleaner and closer trimmed than ours. The price, compared with our wool as washed on the sheep, may be rated at 27 cents per pound, as the foreign value. This, with 8 cents for charges of importation and profit, and 12 cents for duties, would make the price here 47 cents, or, without a profit, 43 cents.

Such, in my view, is the effect of the tariff of the last session. Yet it does not do all that, in my judgment, ought to be done. This country produces wool sufficient for all its wants. I wish to see done, for this interest, what is our true national policy for every great agricultural interest: and that is, in relation to every agricultural product, when we produce an abundance and there be no danger of monopoly, that duties should be laid, not merely for protection, but for prohibition. We have done this for *cotton*, and why should it not be done for *wool*.

December Notes from Buffalo to New-York.

The first place we stopped at was our excellent friends the Messrs Raynors, who are pleasantly situated on a fine farm in the town of Clarence, about 18 miles from Buffalo. Their soil, as indeed much of this region, is underlaid by porous ledges of limestone, generally a few feet below the surface, but sometimes cropping out so as to leave the rock naked to the eye. In addition to these ledges, there is more or less stone scattered over the land, in detached pieces, varying in sizes from a pebble up to considerable of a rock, and answer well for making fence for the farm. Though presenting slight obstructions in cultivation, this stone is considered rather beneficial than otherwise to the soil, for we find it drier and more forward in its crops for the same latitude, than lands usually are, destitute of this stone. They also, no doubt, assist in keeping it cool and moist during very hot weather in the summer. It is an excellent soil for grass, roots, corn, and especially wheat and the smaller grains; of all which it is capable of producing abundantly.

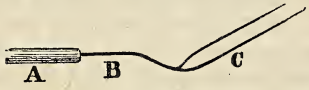
The Messrs. Raynors have a fine orchard here of 16 acres, which being so near to Buffalo market, they sell the fruit at a good price on the tree, which pays them on an average 10 per cent. interest on the land, valuing it at $100 per acre, besides leaving them an abundant supply of the choicest fruit for family use, and many refuse apples, which are fed to pigs; and in addition to all this, they cut nearly 2 tons of first quality hay per acre from the orchard. The large bins of apples which they showed us in their cellar, of many varieties, were luscious to look at and to the taste besides, and were so tempting that we were obliged to put an embargo upon ourselves at once, for fear of a surfeit, and when we came to leave we found a large supply in our sleigh box, placed there by way of dessert for our journey. There is no greater luxury than a good orchard, and when planted with well selected fruit, there is nothing more profitable, and we wonder more attention is not paid to them.

It was in the spring of 1839, that a nurseryman proposed to let us have a lot of selected fruit, in exchange for a few pigs. We took the trees, and while planting them with our own hands, along the borders of our garden, (which, by the way, is of a cold tenacious soil, and a bleak exposed place,) one of our neighbors came along, of the *Do-nothing* and *Ill-prophesying* order, and began to comfort us with the assurance, that fruit trees planted in such a cold soil would never thrive; and if they did, by great care, the wind would be sure to destroy them as soon as a little grown; the fruit would be stolen, and we should never have the comfort of it, and he did not believe anyhow they would ever bear soon enough to do us any good as long as we might live. We were quite credulous to the first assertions, and as we had not then arrived to even the half of the three score and ten years, allotted to man by the Psalmist, we simply answered, "our heirs may," and kept on busily planting. The result is, that last year, the third only after setting out this small number of fruit trees, we had all the cherries and plums we wanted, besides lots of them for our neighbors, and a tolerable good supply of apples and pears. The peach trees all died, because neither climate or soil suited them. To be sure the trees were well advanced that we set out, being from 5 to 6 years old, but it goes to show how very soon one may get a supply of fruit of his own, even in a bad location; and if we were seventy years old tomorrow, and had a rod of spare ground, one of the first things we would do, should be to plant a fruit tree, or fruit shrubs upon it; and to conclude this episode, *Mr. Do-nothing* and *Ill prophesying*, was the most importunate beggar of fruit we had during the season, and he has done nothing for himself yet, and we fear never will, though he possesses much more and better land than we do.

The Messrs. Raynors have some fine stock, mostly grade Durhams, and they are endeavoring to grow up a choice milking breed for the dairy, by crossing an excellent thorough bred Durham bull, on the best native and grade milkers they can procure. Their pigs also are fine, which they intend shall all be full bred Berkshires as soon as possible, yet with no intention of breeding for sale, but simply for their own fatting.

It was here we saw a new grain fork, the best adapted for pitching sheaves of grain, of any thing of the kind we ever before noticed.

New Pitchfork.—Fig. 22.



Its construction is perfectly simple, and it can be made by any skilful blacksmith accustomed to forge pitchforks. It consists of two tines C, nine inches long, which are spread 2 inches at the shank, and 2 1-2 at the ends. The shank has a sudden curve at the end, of about 2 inches, so as to bring the points of the fork nearly in a line with the direction of the handle and shank. The naked part of the shank B, is 8 inches long, 1 inch wide, by 1-3 of an inch thick, and enters the handle, which has a ferule A, on the end, of 5 inches, secured to the shank by a strong rivet. The tines and shank are made of the best of German steel, and possess great elasticity, which very much lessens the labor of pitching. The handle may be of any desired length, but should possess as much elasticity as possible. Mr. A. Raynor informed us, he could easily throw a sheaf of wheat over his barn from the load, and that he never pitched so easily with any instrument as this. The sheaf leaves the tines with an elastic spring, and the fork at the same time utters a musical sound, like the tuning fork, when struck, of a music master. Well pleased with what we saw here, and after partaking of a good dinner, we set out again upon our journey.

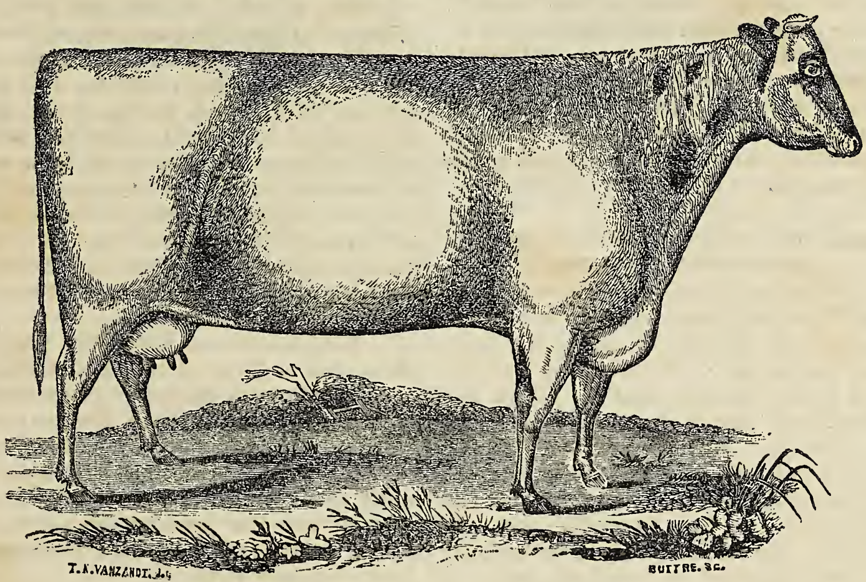
Though of rather a light soil, it is a fine wheat growing district all the way to Rochester, the raising of which has been quite profitable till this year to the farmers; and large stacks of straw are every where seen on the road, and buildings, stock, and other things, making a beautiful rural picture, even in the dead of winter, and giving the traveller a favorable idea of the comfort, neatness thrift, and independence of the inhabitants.

At Rochester we had a pleasant chat with our brother editors of the New Genesee Farmer We believe it is Mr. Colman's intention to proceed next spring to Europe, to spend a couple of years in taking notes on agriculture, in a similar style to those he published when Commissioner of Massachusetts. This we are not at liberty to officially announce at present, but we hope to be authorised soon. We are certain if he does go, he will present the American public with the most interesting and valuable account of European agriculture ever yet given to it. We shall envy him his tour, if he enjoys half the satisfaction which we did recently in England.

Taking the railroad the same evening for Auburn, we arrived, maugre 15 inches fall of snow, early the next morning. The cars were well warmed by stoves, and with cushioned seats and backs, and our own carpet bag for a pillow, we had a comfortable time of it and a good night's sleep. Soon after our arrival at Auburn, we were called upon by Col. Sherwood, one of the most spirited farmers and stock breeders in that section of the country, who immediately took us to his farm, about one mile from the town. Col. S. only got possession of this place last spring, when scarcely a shed or rod of good fence was upon it. He immediately erected cheap comfortable barns, connected by long sheds of several hundred feet range, on three sides of a square; thus making an excellent and well sheltered yard for his stock, open only to the south. If our farmers only knew how cheaply this thing could be done, and how much it adds to the comfort of the stock yard, they would not neglect it, as they now do, and leave their cattle exposed all day to sleets and snows, and shivering in a cutting northern wind.

Of course in the dead of winter, nothing was to be seen but the stock, of which Col. Sherwood's greatest pride is his Shorthorns; and of these we may be spared saying much, in consequence of his great success in carrying off so many premiums, at the annual State and County Shows, for the two past years. As a specimen of his stock, we give an engraving of Stella, that took the first prize, both at Syracuse and at Albany.

SHORTHORN COW STELLA.—FIG. (23.)


T. K. VANZANDT, del.
BUTTRE. SC.

The property of Col. J. M. Sherwood, of Auburn, N. Y.

The artist has hardly done her justice though, especially in the head and neck, which he has given a bad set. She is a fine large, rangy, fashionable cow, and we recollect greatly admiring her when a two-year old, in her breeder's yard, Mr. Rotch, of Otsego. Her daughter Sylvia, 3 years old, by Hero, has got so fat on grass pasture alone, the past season, that Col. S. has found it necessary to try to reduce her if possible, leaving her out in an open shed, and giving her nothing but wheat straw. She is a superior animal, especially good in handling and in the brisket. Diantha, bred by Mr. Alexander, of Otsego, is much like Sylvia; of same age, and taking the same fare. We much admired Lily also, she is so fine, and shows so much in a small compass. She was bred by T. H. Newbould, of Livingston, out of his imported Netherby, by Cadmus. She has a gem of a yearling calf by Mayduke, bred by the Hon. Adam Ferguson, of Upper Canada, who claims for this stock an ancient pedigree, bred for more than a century back with great care, in Northumberland, England. Archer, that won the first prize for bulls at Syracuse, we found there in his usual noble presence; but we have not space to dwell further upon these animals, and turn to their manner of feeding, which is precisely like that of the common stock of the country, among good farmers.

Col. S. has commenced with straw and cornstalks, and when these are all gone, and *not till then*, will he begin with his hay. He has a large lot of ruta baga in store, which he is feeding out moderately, to some of the younger animals, and the older ones will have it towards Spring, if any fall away, or a cow has a calf by her side. Kept in this way, the thorough-bred and grades, show a decided superiority in size, and thrift, over the native animals, side by side, fed precisely alike. We wish every farmer in the county would call upon Col. Sherwood, and satisfy themselves as to the correctness of what we assert, and if they are convinced of its truth, *advance a step further*, and *take home a Durham bull with them.* Col. S. is determined to sell in accordance with the times. He has a great desire to see fine stock spreading about him, and no one, we think, can object to his prices.

From this, Col. S. drove us to Major Dill's, who has also a fine stock of Short Horns; derived principally, we believe, from Mr. Weddel's breeding. Many of the remarks which we make of Col. S.'s animals, will apply to Major D.'s. His best cow is Gazelle, and his finest heifer Hebe. She took the first prize among 2 year olds, at the State Show at Albany, last September. They are both beautiful, and most correctly and appropriately named.

THE TIMES, AND PROSPECT OF THE PRICE OF AGRICULTURAL PRODUCTS.

Our correspondence is teeming with complaints of the hard times; and we are repeatedly asked our opinion of the future prospects of the farmer. We must confess that this is a grave question, and the wisest and most sagacious may well pause before venturing upon it. Nevertheless we have an opinion, which we shall proceed to state with great diffidence, and our readers can take it for what it may be worth; and that is, we think the times will gradually grow easier, and produce as gradually rise in value. Our reasons for this are these:

1. There has not been a harvest so generally abundant throughout the country for twenty years; we consequently cannot expect so great a one another season. In the September number of our paper, we gave an opinion that we should have an early and hard winter, and before November was half over it came upon us with unexampled severity; and the prospect now is, that it will be followed by a late spring. If so, there will be a much greater consumption of the food laid up for both man and beast, than if the winter were to prove as mild as the past one was. A late spring may make light crops for the ensuing season; and should this happen, produce will rise in price from that cause alone.

2. Pretty much everything now has got down to its specie value, and consequently cannot well go lower.

3. The passage of the tariff law has set many of our artizans to work at their trades again, who, from the necessities of the case, had become for a few of the past years competitors with the farmers in raising produce

4. An unexampled emigration took place to this country last year from abroad, and this is likely to greatly increase another year. A large number of these people were artizans, and have gone to work at their trades; and as for the rest, they must be consumers at least one year, and in some instances two years.

5. The modification of the British tariff has partially opened a market for considerable quantities of beef and pork, which hitherto, by the high duties there, have been literally prohibited. Large amounts of lard, butter, cheese, and fruits, can also now be shipped to England, and a great increase made in the flour trade. And we shall find all the difference in the world between having rather a *bare* market, than one so glutted as it was in the summer and fall of '41, as to make the holders of beef and pork almost rejoice to find it rotted and become stale on their hands, as was partially the case at one time in New-Orleans.

6. England has at last made peace with China, and in consequence of it, anticipates a greatly increased opening for her manufactured goods in that large Empire; and although all her expectations from this quarter may not be fully realized, still there seems to be no doubt that she can now fully employ most of her idle artizans for a time, which will of course rather increase the market for American provisions.

7. Money is abundant both in Europe and this country for all safe investments, and we do hope to see the spirit of enterprize again start the ensuing spring, in private building and public improvements.

These are the principal reasons on which we base an opinion that there will be a slow and gradual rise in the price of produce. We have given up all hopes of seeing an Exchequer bill passed, or indeed any system of finance established by the present Congress otherwise than what we now possess, viz., the *hard money currency.*

Notwithstanding our markets at this present moment are exceedingly depressed and glutted, we trust the farmer will not despair, but have faith in the future; and if we were able to hold on to our produce, we should be in no particular hurry in selling it. Yet in conclusion, let the farmer be very cautious how he takes credit and contracts debts; and let him not only raise all his provisions, but strive to have as much clothing and all other necessaries made in his family as possible. To those who are out of debt, we don't know but it is as easy to live and make money as when produce brought double the prices that it now does; and at any rate, the condition of the agricultural class of America is singularly felicitous; and instead of repining and longing for things we have not, we ought to be grateful to a beneficent Providence for those we have, and go on cheerfully performing our daily duties, thankful that we are enjoying so many blessings.

Work for the Month.

Stock—See that your stock are well sheltered, well fed, and well watered; that they have plenty of salt once or twice a week; let there be small heaps of charcoal or rotten wood for your pigs to get at and eat as they think proper, and a heap of clay for the sheep and horses, and even horned cattle to lick and eat in their yards and folds, as long as there is snow upon the ground, unless you are feeding them with a few roots daily, with a little dirt adhering to them. Horses, also, should have half a gill of ashes in their food once a week; they give the stomach a good tone, and are the best preventive against bots that we know of; salt is also a good preventive, and by making free use of these, although we have managed horses more or less from boyhood, we never yet had them suffer in the slightest degree in this way. Ashes or lye mixed with the food of pigs, in a moderate quantity, are almost a sure preventive against the kidney worm.

Wood.—See that all the wood is cut this month for the year's use, that it may have time to season and burn freely, and thus enable the good wife to pursue her cooking, baking, and boiling, without having her patience exhausted over a steaming fire, and her eyes half put out in a smoky room.

Manure.—Where the snow is off the ground, leaves in the woods can be raked up and carried into the stock-yards and stables for litter, and to increase the manure. Mud from the swamps can also be dug and put into the manure heaps, and mixed up with them; and don't forget to add a little gypsum, or charcoal, so as to fix the *ammonia*, and retain it in the heap. Ammonia is the most valuable part of manure, and millions of dollars have been lost in this country by suffering it to evaporate from the dung heap. It is a gas which you cannot see, but you can smell it strongly, like the spirits of hartshorn, (a carbonate of ammonia,) when you go into a horse stable; as the urine of the horse has a considerable quantity of it in its composition. Now, farmers here is a *hard scientific term* explained, and what is more easy than to understand it? It is certainly as simple as to understand what the tire on a cart wheel means.

Ditching, Draining, and Plowing.—Where a milder climate than we have here prevails, these can be pursued with success the present month.

All Tools should now be repaired and put in complete order; and whatever new ones may be wanted for the ensuing season, made ready before hand.

Improve the Mind during these long winter evenings, by reading good and useful books; particularly those on the best systems of stock-breeding and agriculture. How much better it is to be occupied in this, than dosing listlessly by the fire, or indulging in frivolous talk, or gadding about in silly company, or spouting politics in a bar-room tavern.

Annual Meeting of the N. Y. State Agricultural Society.

The annual meeting of this Society is to be held in Albany, on the 20th of this month, for the purpose of choosing officers, hearing reports, and judging of certain farm products and essays. It is an important meeting, and we trust that it will be well attended. We understand that certain reforms in the manner of judging and reporting on prize animals and products will be offered at this meeting, and we hope they will be carefully considered and weighed, and if thought beneficial to the great cause for which this Society was formed, that they may be adopted. Ever since we have attended agricultural meetings, we have been dissatisfied with the manner in which judgments were formed and prizes were awarded; and have thought them, at times, so *darkly*, arbitrarily, and capriciously rendered, that we have been led to doubt, now and then, whether the formation of such societies has not done more harm than good. But, upon the whole, the good has greatly predominated; yet this good may be made still better, increasing and increasing, till it has arrived at results in all the operations of agriculture and stock-breeding, as sure and immutable as the working out of a mathematical problem. What glory to itself would not a society attain by such a course; and that it is attainable, we as fully believe as that the sun will rise to-morrow. We shadowed forth our opinion upon these matters in the August number of this periodical; and it might not be considered respectful to the Society, now to pursue the subject further. We therefore forbear.

By the generous encouragement of the State Government, the liberality of a few of our citizens, and the efficient services of its able and indefatigable officers, the Agricultural Society is in a fair state of prosperity. Its show, last September, at Albany, was, upon the whole, quite gratifying; perhaps five times as great in animals and products as at the preceding autumnal show, at Syracuse. The concourse of people also was thrice as large, showing an abiding and increasing interest in these things. We have no doubt but all these matters will be greatly increased at Rochester next year; and to make it more certain, we hope the meeting will be appointed as early as the first week in September. It must be recollected, by going two degrees north, we get into a colder climate. Animals also appear better at this season of the year, and are more cheaply provided with food. Southern gentlemen, and all persons from abroad, are also more likely to visit the show than if held later; and these are becoming important customers to us as stock purchasers.

We think the Secretaries and Treasurer of the Society ought to be salaried officers; their duties are really too onerous to be expected to be performed voluntarily for any length of time, and we ought to be grateful for the indefatigable exertions so long freely offered; but to expect a continuation of them gratis, is, in our humble judgment, asking too much, although we believe the present incumbents would never think of accepting a reward. By giving these officers salaries, they could devote more of their time to the Society, and therefore, perhaps, become more efficient. It has been thought, also, that to have a Treasurer or Secretary to go round among the people, and personally solicit subscriptions, would add greatly to the number of members and the funds of the Society. In these last the Society finds itself sadly crippled, and could greatly increase its usefulness and premiums by an addition to them. Let all then who possibly can, attend the coming annual meeting, or at least, add their names to its members and subscription list.

To Kill Lice on Cattle, &c.

Lice on cattle or hogs, are immediately killed, by rubbing the animals with lard, whale or indeed fish oil of any cheap kind. Rancid lard answers the same purpose as if sweet. We have found these applications quite as effectual as mercurial ointment; and unlike that, it is not attended with the slightest danger. We once lost a valuable Short-horn cow, by applying mercurial ointment, she turning her head round and licking herself, the mercury gathered by the tongue badly salivated and killed her in three days. The only objection to the use of lard, is, that it causes cattle to shed their hair rather too early in the Spring in cold climates.

Another remedy has lately been suggested to us, which we have no doubt is equally effectual, but never having tried it, we cannot speak so positively about it. This is simply buttermilk, strongly salted, and applied to the coat of the animal with a brush. When nits are on the hair, the above applications should be made at the end of every three weeks, so as to destroy the lice as fast as hatched out.

Copying Articles without giving Credit.

☞ We frequently find in exchange papers, articles copied from our publication without giving us credit. We would particularly instance the one on Locust Trees, furnished us by Judge Beatty, and Reports to the American Institute, and Synopsis of Agricultural Society proceedings. Although these last were not written expressly for us, we were at considerable trouble and expense in obtaining and printing them, and we deem it no more than right and just, that credit should be given to the source from whence they were taken. It affords us great pleasure to be quoted from, but we certainly like to have a knowledge of the *fact* stated at the same time.

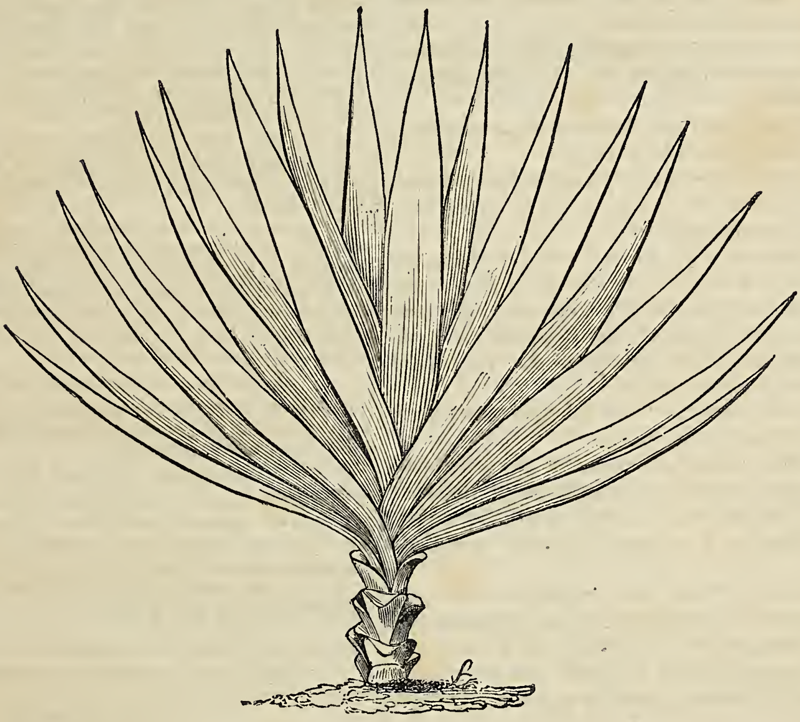
ORCHARD GRASS.

Our attention has been called to the cultivation of this valuable grass, by a communication of Mr. White of New-Jersey. We have had but little experience ourselves in growing it, in consequence of our land not being properly adapted to it. One experiment in an orchard succeeded well, the others not so well, which we easily accounted for in two ways: the seed we used was not properly cleaned, and it came up in tufts; the soil also was too wet and heavy. We recollect that the late Judge Bradley, of Marcellus, in this state, one of the most practical and enlightened farmers of his day, was a strong advocate for the cultivation of orchard grass. We found it quite a favorite in our travels through Ohio, and the reasons which farmers then gave us for its cultivation were, that it afforded them the earliest spring food of any of the cultivated grasses, and yielded the largest quantity per acre;

that its growth was rapid, and particularly succulent for stock, if kept within a moderate height by feeding; that it made a fair quality of hay, flowered and ripened at the same time with clover, so that they could always be advantageously cut together; and if rain soon followed mowing, it sprung rapidly up again, giving them, in favorable seasons, three cuttings, of about a ton to a ton and a half each; and finally, it grew vigorously in the shade, when other grasses would scarcely flourish.

A friable loamy soil suits it best; and if the seed be properly cleaned, and a sufficient quantity put into the ground, there is no danger of its coming up in tufts. We never saw a more even and luxuriant vegetation, than this grass presented in the fields of Ohio; and we have every assurance that this advertised by Mr. White, is well cleaned and of a good quality; and the price at which he offers it is much lower than usual, $4 to $5 per bushel, being more often asked. It may be sown in the spring, with wheat, oats, &c. A sample of the seed can be seen at this office. See advertisement.

Specimen of a Sisal Hemp Plant.—(Fig. 24.)



Above, for the consideration of our southern friends, we give an engraving of the celebrated plant, from which Sisal hemp Agave Sisalana is made. It seems to be the object of our Government now to encourage the production of hemp, as it has hitherto done that of cotton; and as the Sisal is grown to a considerable extent in Mexico, we should be glad to learn if it has yet been effectually introduced into the United States. The late lamented Dr. Perrine, of Florida, we believe, made some attempts at cultivation, but as we have never been advised of the result, we do not know whether they were successful or not.

This hemp is not only used in Mexico, for ropes and twine, but it is manufactured into many other articles, such as valises, and household utensils; it is said also, to make one of the cheapest, best, and most desirable kinds of paper. It must be recollected that 60 years ago, the daughter of General Green first raised a few cotton plants, merely for their beautiful flowers, and now what a source of wealth and production this is to our country. We do not believe the different kinds of hemp and flax can ever become of as varied and universal use as cotton, but each may largely contribute their quota to our riches, and we should feel rejoiced if we could revive attention to the above promising and useful plant.

National Silk Convention.

A National Silk Convention was held at Northampton, Mass., in September last, which was unusually important and interesting. We condense below a synopsis of its proceedings.

It was unanimously Resolved by the delegates, a highly intelligent body of men, from different parts of the country:

That there are ample grounds for confidence in the silk business.

That the causes of failure are transient, while those of success, diet, and climate, are permanent.

That American silk in *the state in which the worm leaves it, is first rate.*

That a climate and soil adapted to the successful growth of Indian corn, is every way suited to growing silk.

That the natural growth of the mulberry in the United States and China, indicate the adaptation of this country to the silk culture.

That there is every encouragement from past experience, for continued and increased attention to this subject.

That the present tariff for the protection of this article, is satisfactory.

That the state Legislatures are earnestly solicited to promote the culture of the raw material, by offering a bounty, till the country is abundantly supplied for the manufacturers.

And finally, "that our manufacturers and other business men have now every reasonable encouragement to invest, in a wise and careful manner, their funds in this new form of domestic labor—growing and manufacturing silk."

Wild Bees.

The peculiar instinct of this curious little insect which determines it in the choice of its home, has never been satisfactorily given. They sometimes obstinately refuse to occupy a hive, which apparently is perfectly suited to them, and push their way to a remote and uncomfortable place, every way illy suited to their comfort and convenience. What influences them in rejecting the one and seeking the other, and is this new home before determined on? We hope some of our correspondents, more familiar with the subject, will enlighten us.

We once found a swarm of bees snugly sheltered under the combined foliage of a grape vine and the limbs of a small tree, to which it was clinging. No other protection was afforded than this, and the whole comb was exposed to the full force of the elements, yet the swarm appeared perfectly thrifty and healthy.

Ladies' Department.

For the American Agriculturist.

TO MAKE SOUSE.

Boil a pig's head or feet four or five hours, or until very tender, take out all the bones, and lay the meat in a stone jar; boil vinegar with cloves, pepper, and a little salt, mix with this so much of the jelly from the water, in which the meat was boiled, as will prevent too much acidity, and with this liquid cover the meat entirely. When wanted for use, cut it in slices, and after heating it in a frying-pan, pour off the liquid, and brown the meat, or dip the slices in batter, and fry in a pan just rubbed with butter or lard.

A REMEDY AGAINST SCARLET AND TYPHUS FEVERS.

A bath of weak lye and water, or simply bathing the feet in the same, is said to be very beneficial in *Scarlet Fever.*

It is also stated that *contagion* from *Typhus Fever* may be prevented by producing *nitrous acid gas.* "This may be done in the following way. Place a little pounded saltpetre in a saucer, and pour on as much oil of vitriol as will cover it; a copious discharge will ensue, whose quality may be regulated by lessening or increasing the quantity of materials."

CURE FOR AN INVETERATE COUGH.

Fifteen to twenty-five drops of laudanum, mixed with a teaspoon full of magnesia and a little water, taken every night before retiring.

NUT-CAKES, OR DOUGH NUTS.

While your lard is melting to boil your cakes, mix two cups of buttermilk and two of cream, with two or three eggs, one teaspoon full of saleratus, and plenty of fine cinnamon and flour enough to roll; made in this way, they are more tender and less liable to harden, than when raised with yeast. Ella

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

Prospect Hill, Ky., Nov. 7, 1842.

Gent.—In conformity with the request, contained in your letter of the 14th Sept., I proceed to give you such information as I have been able to obtain, respecting the large crops of corn, noticed in Agricultural Journals, as having been raised in Kentucky, in the year 1840, which was a very favorable year for that crop.

The crop raised by George W. Williams, Esq., of Bourbon county, in that year, on one acre and one eighth, was 178 bushels, and consequently the product, *per acre*, was $159\frac{2}{9}$ bushels. These facts appear from the certificate of the gentlemen who measured the corn, contained in the 8th number of the 4th vol. of the Kentucky Farmer. I have this information also directly from Mr. Williams, and have no doubt of the correctness of the facts detailed. The Louisville Journal is therefore in error in stating the quantity raised by Mr. Williams to have been 167 bushels *per acre*. This corn was raised on soil naturally as fertile as the best Kentucky lands. Mr. Williams states, that "it had been in meadow for many years previous to the last seven. The five first of the last seven, it was in hemp; the last but one it was in rye, and the last in seed hemp." It had also the advantage of "a thin coat of stable manure, in its unfermented state, spread on the ground in April, just before ploughing." The season was very favorable for the corn crop, rains having fallen in sufficient abundance, and in proper time to produce first rate crops. Everything, therefore, was favorable to a great yield.

Mr. Williams' method of cultivation was as follows: "As soon as it could be done, after the frost was out of the soil, gave it a deep plowing with a Cary plow; in April, spread manure as above; then cross-plowed with the same plow; then harrowed; then laid off the rows two feet apart with a shovel plow, dropped the seed in the bottom of these rows, as near a foot apart as I could; covered with hoes, and in so doing made the surface level, every clod being crushed with the eye of the hoe; and I then pressed the whole down tight with a good roller. When the corn was about one foot high, I had the weeds cut with a sharp hoe by scraping, great care was taken not to break the surface, nor to hill the corn. It had but one hoeing of this sort." Mr. Williams remarks, that in this experiment "he was governed by the principle that the *roots* were not to be *broken;* that a good bed was to be given the roots to occupy; that *light* and *heat* should get to them equally, and that the whole power of the soil should be brought into action without being burdened."

In Mr. Williams' method of planting, if none were missing, there would be one stalk of corn for each two square feet, or eight stalks for sixteen square feet, whereas if the ground had been laid off, as usual in rich land, four feet each way, and three stalks left in a hill, there would only have been three-eighths as many stalks; or if four had been left in a hill then there would have been just half as many stalks.

During the same year that Mr. Williams raised the crop described above, I measured from an acre of corn growing in a field cultivated in the ordinary way, which had been chequered off four feet each way, and three stalks left in a hill, one hundred and five bushels of corn. This was of the yellow kind, and of medium size. If Mr. Williams' corn had yielded in the same proportion, according to the number of stalks, the product per acre would have been 280 bushels, but it was only $158\frac{2}{9}$, and hence it is evident the ears on his corn must have been, comparatively, much smaller, and probably more than double in number.

If it is intended to leave upon the ground a number of stalks equal to one for each two square feet, Mr. Williams' plan is doubtless a very good one. The stalks all stand single, in the rows, having a space of a foot each, and the rows being two feet apart, are as well arranged for admitting the sun and air, as could be effected with so great a number on the ground. If the season should be *favorable*, and the *cultivation of the best kind*, it is not easy to perceive how a greater quantity of corn (of the like kind,) could be raised upon an equal space of land, *of the same fertility*, and equally well *adapted* to this crop. But if the season should be such as we not unfrequently experience—a very dry one—it appears to me that a crop of corn, planted at the rate of a stalk for every two square feet, would produce but a small yield; and that it would be a hazardous experiment to risk an entire crop, so essential to sustain our stock, for the chance of the increased quantity, resulting from this mode of planting, where every thing turns out in the most favorable manner.

The labor bestowed by Mr. Williams, in cultivating his corn, was certainly not as great as usual. But it must be recollected that the ground on which it grew, had been many years in meadow and hemp, with only one crop of rye. The soil must, therefore, have been almost entirely free from weeds, and in fine condition for raising corn, with very little labor. If the ground had been foul, much more labor would have been necessary; and it may be reasonably doubted whether a good crop could be raised in very weedy ground, without the use of the plow, or more manual labor than the crop would justify.

Having given, in detail, Mr. Williams' method of raising an experimental crop of corn, in 1840, I will now state that of Mr. William R. Duncan, of Clark county, the same year.

"The land," says Mr. Duncan, "had been

in grass for about twelve years preceding. Soon as the frost had left the ground sufficiently to admit of plowing, I put in two Cary plows, running one after the other, in the same furrow, the first one cutting through the sod, say two inches in depth, the second six inches deeper, and completely covering the sod turned over by the former. About the middle of April I put my plows into it again and cross-plowed it. I then harrowed it with a very heavy two horse harrow, marked it off 3 1-2 feet each way, and planted with three or four grains in each hill. Three shallow plowings was all the after cultivation." Mr. Duncan, for reasons which he assigns, departed from the usual practice, in plowing his sod a second time. If the sod was blue grass, as I suppose it to have been, from the long time it had stood in grass, I am of opinion, that whilst he added considerably to the labor, he added nothing to the quantity of the yield by the second plowing.

Mr. Duncan states the product of one acre of his crop at a fraction under 120 bushels. Sod ground, especially blue grass sod, yields considerably better the second year, after the sod has had time to decompose, and form an intimate union with the soil. Mr. Duncan's crop was not produced, therefore, under the most favorable circumstances,

General James Shelby, of Fayette county, obtained the premium, at the Jessamine County Fair, for the year 1840, for the best five acres of corn. The product of these five acres was at the rate of one hundred and ten bushels per acre. His mode of cultivation is not given, and I have no information on that subject.

The Kentucky Farmer, in giving an account of this Fair, says there were six competitors, but for reasons, of which the editor was not fully informed, all withdrew, except General Shelby, to whom the premium was awarded. "None of those, who withdrew, produced less than 110 bushels per acre, and two produced over 190 bushels per acre." In the succeeding number, (page 61) in speaking of the large crops of corn, which our soil is capable of producing, by proper cultivation, the editor says, "The crops of Messrs. Bryant and Young, of Jessamine, referred to in our last, that of General Shelby," &c. From this quotation I infer that the crops of Messrs. Bryant and Young were those spoken of as exceeding one hundred and ninety bushels per acre. The circumstance of these gentlemen withdrawing, as competitors for the premium, when their crops were so much better than that of Gen. Shelby, is calculated to produce some doubt whether the facts where correctly reported as to the amount of their actual product. That I might be enabled to report to you the true state of the case, I addressed a letter of inquiry to Thomas B. Stevenson, Esq. late editor of the Kentucky Farmer; in reply to which, he assures me, that he wrote letters to sundry friends, and conversed with others, who saw the crops of Bryant and Young growing, and witnessed the advancement; and from these various sources of information he was fully convinced of the correctness of the facts reported, as to the produce per acre of the crops of Young and Bryant. Among other informants was Tucker Woodson, the Senator of Jessamine County, with whom, he remarks, "I am personally acquainted, and in whom I know that perfect reliance can be placed. There can be no doubt, therefore, that the crops of these two gentlemen did yield over 190 bushels per acre, that is to say the five acres which competed for the premium, but which were withdrawn from the competition."

The reason for withdrawing these crops is explained by Mr. Stevenson, but I do not deem it necessary to repeat them here.

Mr. Stevenson was not able to give me any information as to the mode of cultivating these crops, other than what is contained in the Louisville Journal, to which you refer me, except that Young's crop "was grown on a piece of made ground, formed by a millpond." I cannot account for the yield being so much greater than that of Mr. Williams, whose method of planting, I think, is better calculated to produce a larger yield, all other circumstances being equal. Probably the corn planted was of a larger and more productive kind. The soil may also have been better adapted to the corn crop.

The above crops were all produced in 1840. The present year has been quite a favorable one for the corn crop, and I was very desirous of giving you the product per acre of a very heavy crop, which I saw growing about the first of October, on the farm of Isaac Cunningham, of Clark County. I wrote to him, soon after getting your letter, and requested that he would have an acre of his corn gathered, and carefully measured, and report to me the quantity, together with his mode of cultivation, &c. I regret that a severe indisposition, from which I fear he will not recover, has prevented my request from being complied with.

Mr. Cunningham's corn was planted on a rich soil, which had lain ten years in blue grass, and it was the second year after it had been plowed. The sod, when I saw the corn growing, had been completely decomposed, and the soil was very mellow and light. The corn had been carefully cultivated by plowing each way, and was perfectly free from weeds. It had been planted 3 1-2 feet apart, and thinned out to four stalks in a hill. It was yellow corn of medium size. From a personal examination, I estimated that each hill would average four good ears, one hundred of which would make a bushel of shelled corn. As an acre, planted 3 1-2 feet each way, will contain 3,556 hills, *nearly*, the number of ears would be 14,224; and consequently the product would be 142 bushels per acre. I give you this as my estimate, which cannot be far from the truth; and I regret that I could not give you the result, by actual admeasurement.

Yours truly, A. Beatty.

For the American Agriculturist.

The Genesee Connty Fair.

This took place on the 20th and 21st September. It was characterised by a good spirit, and was much superior to the two preceding ones. This was gratifying, as a general fear existed that there would be a failure. There was a large exhibition of cattle, many of which were of a high order of excellence. With the exception of some working oxen and one cow, not a single animal of native cattle was in the yard. All were either pure or grade of the Durham or Devon. The conviction that the improved breeds are superior is thus shown, and a doubter need only have seen the animals that day to be no longer a doubter. The grade animals were in excellence, just in proportion to the amount of breeding. Bulls were shown by some six or seven competitors. Among them were four thorough bred ones and one of those imported.

The premiums were awarded to Z. Cone, Esq., for his bull, 3 years old, and a cross of the Devon and Durham, bred by P. A. Remsen, Esq., got by the imported bull Alexander, dam, by Holkam, a Devon. The second to E. C. Dibbles, imported bull, a Devon, from the herd of Mr. Davy, of North Molten, Devonshire, England; the third to Mr. Durham, for his grade bull, by imported Rover, formerly owned by Mr. Weddle, of Monroe Co. Mr. Remsen exhibited his superior bull, Enterprise, by imported Alexander, dam, imported Lavinia. Animals of all the different races or crosses were shown in the same class. This should not be. A Devon and a Durham may each be of the highest order of merit, and yet there can be no fair comparison made between them.

The show of cows was superior, especially of grade ones. The cow to which was awarded the first premium in the class of Durhams, weighed more than sixteen hundred. The first premium for Durham cows was awarded to P. A. Remsen, on his cow Premium, bred by himself, got by imported Volunteer, dam, by Otto; the second to S. Skidmore, on his cow, got by imported Alexander, dam by Otto; the third to P. A. Remsen, on his cow Beauty, bred by himself, got by imported Volunteer, dam, imported cow Adelaide. In Devons, the first premium was awarded to Mr. Beck; and the second to Mr. Beck; the third to T. Cary, Esq. Mr. Beck exhibited several beautiful pure Devon cows and calves; they were of a high order of excellence. In working cattle the exhibition was rich; Mr. Remsen showed a pair of 5 year olds, which weighed 1,975 lbs. each. Their superiors at the same age can hardly be shown. They were grass-fed only, and have been in the yoke when required, all summer. The show of grade heifers, (there was not a pure Durham heifer, and only one pure Devon heifer on the ground,) was capital. Two shown by B. Murphy, of Le Roy, were beautiful. Mr. Dibble's pure Devon heifer was universally admired. There was a large number of bull calves shown, and to Mr. Dibble's was awarded the only premium in this class, which was not of a high order; in it Mr. Remsen exhibited a superior calf, but he was too young for competition. In heifer calves of all breeds the first premium was awarded to P. A. Remsen, for his pen of three Durhams; and beautiful they were; and the second to Mr. Beck, for his pen of three Devons; in this class all races being shown. It may be observed, that there is less difference in classes than in the grown animals of the Devon and Durham.

The display of hogs was inferior; indeed this is not a pork-producing county, none being raised except for home consumption.

In sheep there were some superior animals shown, both among the Leicesters and the South Downs. Those of Mr. Shapland, of Stafford, to which was awarded a premium, were highly admired and beautiful. There were not a large number on the ground, but the quality was as superior as the number was small.

In horses there was nothing more than an average exhibited in stallions, mares, and colts. A pair of horses, well matched and capital, exhibited by Mr. Gould, of Batavia, received the first premium, and another pair by Mr. P. T. Fargo, received the second. In the matched horses there was a decided superiority.

Of roots and grains there was a meagre display. There was no exhibition of wheat; and no crops offered for premiums. This was owing to a partial failure of wheat this year. It is said there was a third less than an average, and the berry by no means good. Two years since, Lewis Clark, of Darien, received a premium for a crop of 61 bushels to the acre. To Mr. Cone was awarded the first premium for corn—on two acres, of 77½ bushels to the acre; to Mr. Lewis Clark, the second for 69 bushels; both crops were of the Dutton corn, both well manured, and cultivated without hilling. A frost on the 11th of June injured both pieces. The corn was sound and of a good quality. In roots the yield was very moderate.

Of domestic articles the display was large and beautiful. There were two very superior Ingrain carpets made from wool, grown, spun, and dyed in the county. They were exhibited by the manufacturer, who resides in Bethany. The figures were beautiful and the colors brilliant. There was a Wilton rug made by a lady of Bethany and her daughters. Its beauty and excellence in material and taste, placed it in the rank of the most superior of the imported ones. The Committee on those articles awarded it a premium, saying that they had never seen its equal, and it was the unanimous opinion of all, that the Committee were right. There was beautiful broad cloth; indeed cloth of every discription. Silk in great variety, from the cocoon to the woven material; beautiful sewing silk and twist; indeed the silk display was admirable. There were hats, boots, shoes, counterpanes, quilts, table covers, shawls, &c., in great quantities, and all admirable. One table cloth most beautiful, was exhibited by Miss Heston, of Batavia.

In butter and cheese there were few competitors. All the butter shown, was superior. Mr. Z. Cone exhibited some boxes of excellent roll butter, and received two premiums. There was but one single cheese offered. This county is not a dairy county. Prior to the division in 1841, of what was then Genesee county, there were many daries in the county and large quantities of cheese produced, but the division formed the territory into two districts, the grazing, now Wyoming, and the grain growing, and at present it is a fact that there is not in Genesee county, a single large dairy.

The President, Theodore C. Peters, Esq., was to have delivered an address on the first day, but owing to the late hour at which the Fair ended, being quite 5 o'clock, it was omitted to be spoken, but will be published. It should have been delivered on the ground while the Committees were viewing; and it is suggested so to do whenever the weather will admit. This at once secures the largest audience.

On the second day the plowing took place, and was well done. The number of spectators was large, and the interest great; indeed the plowing here as everywhere, constituted one of the main features of the fair.

Immediately after the plowing was over, there was a large assemblage at the Court House, to hear an address from Mr. Colman, the editor of the New Genesee Farmer. His address was capital, was listened to with pleasure, and will no doubt produce good. Its object was to show, and it did show, the necessity and facility of progress in agriculture. Mr. Colman's personal appearance and manner, gave force and attraction to his address; indeed he is a very agreeable speaker.

To this succeeded the reports of committees and the election of officers. T. C. Peters was re-elected president.

The fair was characterised by a spirit that ensures success; all seemed animated, interested, and satisfied. D.

For the American Agriculturist.

Fairs in the West

Gent.—Will it interest your readers to hear how we "do up" things in the prairie region of the west? I have just attended two:—The first at La Porte, Ia., Oct. 13, 14. La Porte is one of the new counties of Northern Indiana, which have sprung into existence within the last ten years. It adjoins Lake Michigan, and has a port and *unfinished* harbor, called Michigan City, from which an immense quantity of wheat goes down the lakes; mostly to the Canada market. The county has an extensive prairie called "Door Prairie," one of the very finest for all kinds of grain, but not equal to those of a more clayey soil for grass. The county, although destitute of mountains, hills, and dales, yet abounds in good mill seats, upon never-failing streams, many of which are improved by fine flouring mills.

The show of stock was small, but indicating that the spirit of improvement has at length begun to show itself in the west. There were some good Durhams, and improved native cattle, and several fine samples of Merino, Saxon, and South Down sheep—and the gentlemanly Berkshire was there in his pride and beauty. The exhibition of butter, and cheese, and household manufactures was such as plainly to show, that that portion of the community which is the life of all our agricultural societies, had here lent their good works to promote the good cause in good order.

There was also a show of fine fruit, such as no one could expect in so new a country, unless he well knew the remarkable productiveness of our soil.

But the proudest part of the show was of the human species—men, women, and children—old and young, of all classes and occupations, turned out to make this what every agricultural fair always should be, a most joyous farmer's festival—an annual public thanksgiving. And as public drinking is out of fashion, a public dinner was substituted. The tables being arranged in one of those beautiful Bur-oak groves which are only to be found in this country of groves and prairies, were covered with a profusion of good things furnished by the hundreds of fair hands who graced the feast by their presence. The whole scene being enlivened by what should always accompany such a festival, a fine band of music, volunteered for the occasion.

It was a day, as all such should be, well calculated to promote and increase the general stock of human happiness.

I reached home from the La Porte Fair on Saturday, and on Monday I started again to attend the Fair of the "Union Agricultural Society," of Northern Illinois, held at a place called Aurora, on Fox River, 40 miles west of Chicago, on the 19th and 20th October. This "Union" is formed out of nine of the northwestern counties of the state, almost the entire population of which, has been made up of eastern emigrants since the time of the almost forgotten "Sack War," of 1832, when General Scott struck terror to the Indians, and the cholera struck terror to his army.

"What a change" in ten years! Those of the magic lantern are scarcely more magical. Then the food of the little army had to be brought from the lower lakes and carried upon pack horses across the great desert between Lake Michigan and the Mississippi. Then a steamboat had never visited the little garrison and trading post of Fort Dearborn, now the flourishing city of Chicago, whose harbor is crowded with steamers, ships, and schooners, full freighted up with emigrants and merchandize, and down with wheat and other products of the rich soil of the vast land of unsurpassed fertility, lying around the head of Lake Michigan.

Now every grove is surrounded with highly cultivated farms. The streams abound with fine mills, manufactories and villages. The country is intersected with roads, and the streams are crossed with bridges, while splendid stage coaches career over them in every direction.

While addressing the audience at the late Fair, I could not avoid drawing the comparrison between the encampment of Indians upon the same ground ten years ago, who never broke the soil in search of sustenance, and the six thousand happy, healthy, smiling, intelligent cultivators of the earth then gathered together to enjoy the "farmers' holiday."

Talk no more about the magnitude of your eastern fairs, unless at such a time as your late one at Albany, you can muster at least one hundred thousand.

Here too, some plan in regard to a public dinner was adopted as at La Porte; and I had the satisfaction of sitting down to a most sumptuous dinner with *three thousand* guests; one-third of whom, were the *wives and daughters* of Illinois farmers. This, sirs, is a specimen of the spirit that is abroad upon the prairies of Illinois. And this too, in a country that is still looked upon by your eastern readers, as a vast wilderness, sparsely settled by a demi-civilized race of inhabitants.

I presume after what I have said of the "gathering of the people," I need not assure you that the other part of "the show" was highly creditable to the society. I must not forget, as I have been a strong advocate of having music at all agricultural fairs, to tell you that here too, the company were enlivened not only by one but two bands of music, both cheerfully volunteered for the occasion, while in the procession floated nine appropriate banners, one for each county embraced in the society.

The officers and members were distinguished by badges, and the marshals by wands peculiarly adapted to the occasion, for they were *immense stalks* of Indian corn.

But enough upon this subject. I only wished to let you know that we can do something else here in the west beside raising wheat at 40 cts. a bushel.

It is my intention soon to give you an article descriptive of this prairie region.

Be assured Messrs. Editors of my personal esteem, and earnest hope for the success of your journal.

I remain yours, &c.
Solon Robinson.

Lake Co. H., Ia., Nov. 4th, 1842.

Three thousand guests at table certainly beats our state show at Albany, and fully equals the number who sat down to dinner at the meeting of the English Royal Agricultural Society, at Liverpool. But we hope to come up to this number next year at Rochester, and that Mr. Robinson, and many of his prairie friends mill be there as partakers in the good things which will undoubtedly be provided for the occasion.

We insert another valuable article from Mr. Partridge, on *City Manures*, and beg to call the serious attention of the neighboring farmers to it. Let them not be deterred from reading this communication, from the use of the scientific terms in it, for the sooner they understand them the better it will be; and they must recollect, that it is quite out of the question for the writer to convey the information, without making use of them. But all may understand the general meaning, and by gathering up and making use of even a part of these fertilizing resources pointed out, they will gain for themselves what would pay for many years subscription of this paper.

For the American Agriculturist.

To our Farmers who obtain Manure from the City of New-York.

In my last I brought to your notice two fertilizing materials heretofore thrown away in our city. I shall proceed in this and future essays, to bring forward all others that may come under my inspection.

There was one error in my last which I now rectify. In referring to charcoal dust I am made to say, that "it can be bought at two shillings per barrel, and that a friend had bought sixty barrels at that price." It should have been one shilling per barrel. This is the dust left in the bottoms of the vessels after selling the large coal.

I shall now bring to your notice the article of soap lees, *i. e.* the lees thrown away by our soap boilers. This material is one of the most valuable fertilizers the farmer or gardener can collect, with the exception of ammonia. When soap is made with caustic potash lye, and then hardened with the soda of salt, the liquor run off will contain muriate of potash, with a small portion of free potash. If this liquor contained no other ingredient, the best application would be to add 2 gallons of it to 20 gallons of water, and let it fall on the land by the same process that our streets are watered. There is, however, another material combined with it, which makes it the interest of the consumer to put it into a compost heap with charcoal. There is in every hundred weight of fat used by the soap boiler, two or three pounds of thin filmy skin, which do not enter into the soap; and this being dissolved in the lye, passes off with it, and when decomposed in a manure heap, will furnish a large supply of ammonia. To prevent its evaporation when formed, the presence of charcoal or plaster will be necessary.

When soap is made with barilla, the residuum will contain muriate of soda, carbonate of soda, and some caustic soda; together with the animal matter as mentioned above.

The value of this material can be accurately estimated by those using it, when I inform them, that five gallons of the lye contains in solution more than two pounds of potash, when made with potash lye, and hardened with salt; or of soda, when barilla is used. This is as much alkali as would be contained in three barrels of soapers' ashes.

A gentleman near Hartford, Conn., has used soapers' lees as a manure, and speaks of its productive powers, as far exceeding his most sanguine expectation.

The next material I shall call your attention to, is the blood now thrown away at our slaughter houses. This material is one of the most valuable of the fertilizers, and should be placed in a manure heap, with a large portion of charcoal, or plaster, to absorb the ammonia formed during its decomposition. An addition of caustic lime would greatly facilitate the process. It is a compound material, consisting of three salts of soda, and extractive matter. One of the salts of soda is a phosphate, which indicates its peculiar applicability to the potatoe, as this plant contains more phosphate of lime than any other culinary vegetable. It also contains considerable prussine, which readily passes into ammonia when decomposed by fermentation. Some few years since dried blood was employed as the animal matter in making prussiate of potash.

I shall now direct your attention to the liquor thrown away by our gas houses. I can speak of this material experimentally, having sold thousands of pounds of single and double F ammonia made from it. To those farmers and gardeners who live at a distance from New-York, I would recommend to mix with this liquor a large quantity of ground plaster, stirring well several times, and then covering down until the plaster has all settled to the bottom. The plaster in this case will absorb the ammonia, and the precipitate may be conveyed away at a small expense. A much smaller quantity of charcoal would answer than of plaster, but in this instance the application would be far more troublesome and tedious. Those who live near can cart it away in casks, and place it in their compost heaps, adding charcoal, as before directed for ammoniacal applications. Land already containing charcoal may be watered with this liquor, by mixing it with eight times its measure of water, but if put on in its full strength, the vegetation then in the soil will be destroyed by it. This effect is, I believe, called by our farmers burning. I presume, if a man were to be stuffed with food, however nutritious in moderate applications, until he were filled to the mouth, he would die under the operation; just so it is with vegetation, when over-fed with alimentary food.

I would suggest to one or more of our enterprising gardeners, to place some of the empyreumatic tar, collected in making gas, and of that produced in distilling pyroligenious acid, into a compost heap, adding to it charcoal and quick-lime, and try its fertilizing powers.

I shall proceed to call your attention to the coal ashes, and the soot, now thrown away in our cities.

There can be no farmer so ignorant as not to know that soot is an exceedingly valuable fertilizer. To my knowledge it has been collected in England, and sold to the farmer for more than sixty years. One hundred weight of it is considered equivalent to a single cart load of barn-yard manure; yet our Long Island farmers have permitted the immense quantity supplied by sweepers in New-York and Brooklyn to be thrown away. Now supposing we have seventy-five thousand chimnies in New-York and Brooklyn, each chimney swept twice a year, and each sweeping to afford twenty pounds of soot, there will then be thrown away fifteen hundred tons of soot per annum. This would be amply sufficient to enrich annually three thousand acres of land.

Soot, by analysis of Braconnet, is found to contain fourteen distinct materials, all of them good fertilizers. Rather more than thirty per cent. is similar to a material made from sawdust and potash; about twenty per cent. is animalised matter, soluble in water; fourteen per cent. is carbonate lime; more than ten per cent. is acetate and sulphate of lime, and about five per cent. acetate of potash.

Our farmers will perceive, from the above analysis, that every one hundred pounds of soot contains more than seventeen pounds of potash, or more than three hundred and forty pounds in every ton. Thus we prove, that if all the soot thrown away in New-York and Brooklyn could be applied to our Long Island farms, they would obtain a supply of potash alone equal to five hundred and ten thousand pounds annually, equivalent to twelve hundred barrels, and this only equal to one-third of the fertiliziag properties of soot!! Let me ask our intelligent farmers if they will continue to permit so valuable a material to be thrown away?

The ashes of coal is a valuable material for pasture land, more particularly when the sod lies on clay, or when it becomes mossy. In applying ashes to such land I have seen it produce surprising effects; but I have never had any experience of its application to arable land. I should consider, however, *á priori*, that it could not fail to be highly beneficial to heavy soils.

Wm. Partridge.

Mr. R. H. Hendrickson, of Middletown, Ohio, writes us under date of 25th November, 1842:

> "I will give you some idea as to the crops of corn in the Miami Valley, from Dayton to Cincinnati. It will average 65 bushels per acre, which is from 15 to 20 bushels more than the average crop for the last five years. I have about half finished gathering my corn, and it has yielded from 85 to 100 bushels per acre. I shall send you some seed corn in the spring."

We shall be happy to receive it and make a gratuituous distribution among our friends. Mr. Hendrickson has taken much pains to perfect the seed of his corn, and we know from personal inspection of it on his farm last year, that it is very superior. It should not be planted, however, above 40° of north latitude, and on a rich soil. It is of the gourd seed variety, the ears large and the cob small, in proportion to the length of the grain. That it is a great producer it will be seen by the average which Mr. Hendrickson gives of his crop, and this is not a very uncommon yield with him. For seed at home, like Gen. Harmon of this state, with his seed wheat, he asks but a moderate advance on the market price of common corn.

Technical and Scientific Words.

We don't know but the letter below of Mr. Meadows is a fair hit enough, and have concluded to publish it. For ourselves, we shall endeavor hereafter, in selecting our phrases, to go oftener to the pure well of Saxon, rather than to the muddy waters of Latin English. Still, we assure our readers, that it is quite impossible, without much circumlocution, and not even then, to express certain ideas without the use of scientific and technical terms. And let the plain farmer consider one moment, and he will find that no profession abounds with more technicalities than his own, plain and familiar as they may appear to him; a matter which we could easily illustrate, but our correspondent has done it so well, with his best and most useful instrument, the plow, that we forbear. We repeat the suggestion to our farmers, and beg them to consider, and above all to act upon it.

There is no neighborhood that does not possess more or less well-informed, if not scientific men. If all then would form themselves into a club, to meet one evening a week throughout the winter; what with a few books and periodicals, and mutual question and answer, they would soon be as wise in the points and physiology of cattle; and the chemistry, geology, and botany of agriculture, as their boys now are of the different names of the different parts of the plow, and the action and management of the team that draws it. It requires no more effort to learn the one than the other, and the day is fast coming, when that man who remains behind the useful knowledge and improvements of the age, will be farming it at a sad loss.

As our correspondent dates from the classic local of Sleepy Hollow, we hope he may find some Ichabod Crane to enlighten all who wish to learn in the school of agricultural science; and if he does, we covenant to secure him against the graceless Brom Bones of that region, and promise him some fair Katrine's hand for his pains; together with the goodly fields for inheritance, on which the renowned Van Tassel obtained those abundant crops that so dazzled Ichabod's eye as he rode up to his Dutch cottage. We shall be pleased to hear from Mr. Meadows again.

For the American Agriculturtst.

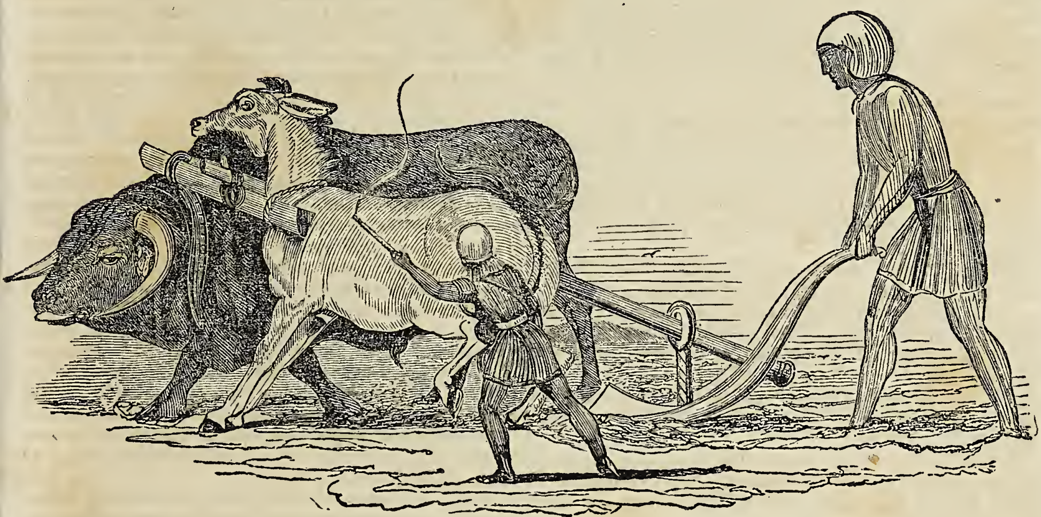
GENT:—In soliciting subscribers for your paper, I get along very well in the country, except being met with the objections, ten thousand times repeated, of "I don't like so much *book farming*, and so many *hard words*. I reckon the best way is to take hold with my own hands after all, and let chemicals, geolicals, and botanicals go; and pints and physiolicals in cattle, take care of themselves. I don't understand them, and can't see what good they do plain hard working folks."

Now it strikes me, Messrs. Editors, as if such persons have about as much reason in their arguments, in persisting in not reading about, and adopting the scientific improvements in stock breeding and agriculture, as the Egyptian had, whom an acquaintance of mine once found at work on the fertile banks of the Nile, in refusing to exchange his antiquated plow and team for one of more modern construction.

I have often heard him recount the colloquy with great good humor; although I suspect at the time of holding it, he got rather warm, and a little out of patience with his obstinate interlocutor.

Landing from his boat one day, to visit some colossal ruins a little way back from the river, he came across a native plowman, laboriously following his profession, something in the following style.

AN EGYPTIAN PLOWING.—(FIG. 25.)



Coming up, and accosting him as well as his broken Coptic would allow, he says:

"Well my friend, you seem to be working rather an ancient instrument here; pray have you never seen any of our new American plows?" taking a book from his pocket, and showing him a handsome engraving of one. "See its sharp pointed share, and long wedged turned mould board; horizontal beam, with a coulter to it, to cut the sod in advance, and a wheel to regulate the depth of plowing; the iron clevis in the end, and a chain hooking into it, and stretching to the yoke, by which the cattle pull it along, with more ease than they can yours; at the same time turning three times the width and depth of furrow, and doing the work three times as well; and here is a dynamometer attached to it, which shows you every second if you please, just how much force is employed in drawing it."

The Egyptian stops, stares, scratches his head, and lifting up both hands in amazement, replies, thinking all the time his interrogator may have just dropped from the moon.

"America! Mould-board! Coulter! Wheel! Clevis! Chain! Dynamometer! Why these are all hieroglyphics to me, and I know nothing about such scientific terms. This is the plow my forefathers have used for 3,000 years; I am no innovator, no book farmer, and know nothing of your technicals; neither our priests, wise men, or magicians ever spoke of these things."

"True my good fellow, I suppose not; but new principles have been discovered in soils and vegetation, and great mechanical improvements have been made in farming instruments within these 3,000 years, at least in my country; and our boys, no bigger than this youngster of a teamster, who is flourishing his whip on that obstinate mule of yours, would laugh at such a plow as I see here, and they are just as familiar with what you please to term *book farming*, and scientific terms, as they are with their bread and butter. And another thing, what a queer sort of yoke you have got there; why, bless me, my friend, instead of those ropes round the necks of your cattle, which seem to me a little too much like the bowstrings of one of your own despots, sent here to strangle them; if you would but just look at one of our easy setting yokes, and neat bows, into which the teams throw their whole weight and strength, bearing up nicely against their breast and shoulders."

"I tell you," says the Egyptian, "I know nothing about such things, they are all hieroglyphics to me."

"Hieroglyphics to you," replies the American, growing rather warm in his earnestness· "well, it is about time you made it full blooded Yankee, my ancient; (ass he was going to say, but seeing one of the four legged progeny before him, corrected the thought before giving utterance to it,) I tell you your mind is as obstinate, and as much hardened against obtaining knowledge, and doing the right thing, as one of your own kings was, at about that favorite epoch of yours, 3,000 years ago; and if you don't beware, and learn what is offered to be freely taught, you may possibly fare yet something as Pharaoh did, and get drowned in the Red, or rather I would call it the *Black* Sea of your own ignorance. And here you have got an ox and a mule working together I perceive. Why man, don't you know better? And don't you see that the mule, true to his nature, has perversely planted his feet forward in the ground, and has thrown himself back on his haunches, and seems obstinately determined not to budge another inch; so that the poor ox has a double load thrown upon him, for he must drag the mule now and the plow too, notwithstanding all your boys flogging. No wonder the poor fellow lolls so much, and no wonder your ground is so miserable scratched up; why I should just as soon think of hitching on to the *tail of a crocodile,* and drag him over the land to plow it, as to such a quaint old fashioned thing and gearing as this. It is well my friend, (growing cooler after this expectoration,) that you have a good soil here, or you would starve to death, thin as you are, and as little as it takes of lentils and soup to fill that drawn-up stomach of yours. Why don't you yoke an ox with an ox, and not with an ass? Don't you know it is forbidden, and that it is written, thou shalt not plow with an ox and an ass together?"

"God is great," answers the Egyptian, "and Mahomet is his prophet—but *he* ain't an ass yet."

"Very true," says my narrator, no longer able to contain himself, "but he is *next neighbor* to it, as well as *another* object I have in my eye;" and despairing of a convert to "scientific terms" and "book farming," he turned away to examine the colossal ruin before him, and was soon lost in a reverie over its magnificence and grandeur.

I was going to add, Messrs. Editors, more remarks of my own to the above colloquy, but fearing that I have already exhausted your patience with my long story, I forbear.

Your ob't. serv't,

John Meadows.

Sleepy Hollow, Tarrytown, Dec. 1842.

Chemistry.

The respected writer of the letter which follows, Judge Garnett, of Virginia, has anticipated what we had just taken up the pen to say; and as he has expressed himself so much better than we should probably have done upon the subject, we cordially welcome him to our columns. What he thinks it "not extravagant to predict," namely, "Doctors for our land," we saw already in practice last year, to a certain extent, in several parts of England; especially in draining, forming water meadows, mixing manures, and even *prescribing*, if we may be permitted to use the term, a rotation of crops, and rules for stock breeding. We do not mean that such persons have yet assumed the title of Doctors, (although they are better entitled to it perhaps, than many who kill and cure *secundem artem*,) but there are regular professors on some of these matters, and a few dependent upon such profession for a reputable and reasonably lucrative living.

For the American Agriculturist.

To Messrs. A. B. & R. L. Allen:

Gent.—The following translation from a French Periodical of high reputation, was given to me the other day, by a young friend; and I now send it to you as a very suitable article for your paper. In my humble opinion, it is calculated to impress upon the minds of all our brethren who will read it, the necessity of acquiring a scientific, as well as practical knowledge of our profession, before we can have any right to expect that we shall be able to carry it to that degree of perfection of which it is certainly susceptible. Could the belief in this necessity become common, I do not think it extravagant to predict that we should soon have Doctors for our lands, as well as for our bodies; and that the analyzing of soils, of the various cultivated plants, and of all substances used as manures, would become a distinct and lucrative profession. Scarcely any farmer, I should think, who had faith in his Doctor, would hesitate to give him a fee in exchange for such knowledge, as would enable him at once to know what crops it was best to cultivate on his particular soils—what fertilizing substances were most suitable to each variety, and what plants were most nutritious for feeding any kind of farming stock. To attain this multifarious knowledge in the common way, and to any very useful extent, requires the experience of a very long life; and after all, the farmer who relies upon that alone, must proceed very much at random in many of his operations. Whereas, the skilful agricultural chemist, after ascertaining the composition of his soils, could enable him at once to know how to manage them in a way most improving to them, and profitable to himself—at least so far as this depended upon the choice and application of manures—the particular rotation of crops, and their relative values as food, either for man or beast.

In the subjoined extract, I was particularly struck with the valuable properties which the Jerusalem Artichoke, has been ascertained to possess, and which, but for the analysis of the agricultural chemist, would never have been known to us. Although a hardy root, and one which will grow in almost any soil or climate, there are probably thousands of us who never save it, and are utterly ignorant of its nature. But now it will soon be known to the whole agricultural community; and for *this knowledge* be it remembered, we are indebted, not to the mere practical farmer, who knows nothing of the principles of his profession; but to the man of *science,* as well as *practice:* in other words, to the agricultural chemist.

With sincere wishes for the success of your valuable paper. I remain gentlemen,

Yours respectfully,

James M. Garnett.

Extract from the number of the *Revue des deux Mondes* for the 1st of August, and from an article on the "Nouvelles Tendances de la Chimie," by M. Quatrefages.

The sources of the oxygen, hydrogen, and carbon in vegetables are known; but whence comes the fourth element, the azote, which is not less essential to them, and still more necessary to the herbiverous animals? The vegetable kingdom offers various answers to this question, for while some of its species derive their azote from the air, others receive it from decomposed organic matter, that is, from manures. This consideration will show what important practical interest may be found in results which appear purely scientific.

Every one is aware of the importance of this question of manures, which in all ages and countries, agriculture has been striving to solve. Thayer proved theoretically that the more a substance was animalized, that is, azotized, the more readily did it restore the fertility of exhausted soils, and M. Boussingaut has ascertained that the most active fodder is that which contains most azote. The exhausting action of vegetation is principally exerted on substances that contain this element. The question of manures then may be thus stated: to ascertain what plants draw least azote from the manure, and with them to raise herbiverous animals; whose dung will restore to the earth the azote requisite for plants which derive their element from the manures only.

M. Boussingaut has attempted this problem by direct experiment. He weighed and analyzed the more common seeds, and the manure used in their cultivation. By a comparison of these weights with the produce obtained, he proved that the crops generally contain twice as much carbon as the seeds and manure; the surplus must have been derived from the atmosphere. The same crops had doubled their hydrogen, but contained only one and a half times the original quantity of azote. There were some exceptions to these general results. Thus in the wheat crop we find precisely the same azote as in the seed and manure, for wheat takes only carbon, oxygen, and hydrogen from the air. The Jerusalem artichoke, on the contrary, quintuples the carbon, and doubles the azote of the seed and manure. A *hectare* of land, planted in artichokes, takes from the air in two years 13,000 *kilogrammes* of carbon and 130 *kilogrammes* of azote.

These results interest the economist as deeply as the *savant*. Such researches are peculiarly attractive to the statesman who considers that agriculture constitutes the true wealth of nations, the only wealth beyond the reach of political revolutions. It is plain that the cultivation of the Jerusalem artichoke a common and hardy plant, must prove very useful. Experience here confirms the predictions of theory. The culture has been greatly extended of late years in Alsace, and it is to be wished that the rest of France would follow the example of a province where agriculture is most advanced.

But when plants are surrounded by atmospheric air, and thus in a manner bathed in azote, why are azotised manures so necessary? Because azote, to be useful, must, like carbon and hydrogen, be united to other bodies. It enters the plant in the state of ammonia, of azotic acid, or of an azotate, and is there reduced, so as to form with water and carbon the vegetable subtances most needful to the animal kingdom. These facts explain the office of manures, and bring the problem of their production to this very simple expression; to produce ammonia cheaply and fix azote at the least cost.

Gin bands.—The letter which follows, from Doctor Vaiden, details a great saving in the cost of gin bands, and as he is a practical planter, we have no doubt of the value of this substitute for leather; and at any rate, being made from cotton, will more strongly recommend its adoption among southern gentlemen, and adds another item to the consumption of the great staple article of the south.

For the American Agriculturist.

Shongalo, Mississippi, Nov. 29, 1842.

Gent.—As your paper has a circulation among the cotton planters, any thing promotive of this interest you should publish. Every individual in this country who has a cotton gin, before starting it, is subjected to the trouble and expense of procuring a gin band at the cost of one dollar per foot, (if made well,) besides consuming a buckskin annually, and a half hour daily in repairing it. I was subjected to all this until recently, when it was proposed by a friend who had tried it, that I should substitute one of cotton towels for the old one made of leather. This was agreed to, and within a few hours, my gin was in successful operation, without having ever annoyed me by breaking or throwing the band. The manner of making, is simply to cut the cloth the right length, doubling it into six folds; which, if it be a yard wide, leaves it six inches, then stitching it the entire length with strong thread, often enough to keep it from puckering. The cost of the one made of towels is $2, that of the leather fron $30 to $40. C. M. Vaiden.

From Doctor Phillips' letter of 29th November, we make the following extract:—

"I think we of Mississippi, can raise wool for sale, cheaper than the north can. I would not say about diseases, but so far as my experience goes, disease is very trifling. We can have pastures the year round, on land that costs not the tithe of your eastern lands, and no expense but salt and minding. At all events, we can have mutton—that meat of all meats.

"I have heard of an engagement of home made pork at 3 cts per lb., and of corn having been sold at 25 cts. per bushel. This certainly speaks well for necessaries, and if we, as farmers, will only continue to do thus for five years, we shall be more independent, though cotton, our great staple, commands a low price. I am not sure but the low price will be a permanent advantage, for many of us will devote time and attention to improve our condition, both as regards our domestic concerns, as well as our minds; and when we have fallen into the plain way, I think the most of us will steadfastly pursue it.

"I have had the pleasure of reading over the great doings of your State Show and Fair. Great times you must have had. May it be greater and greater, until our whole country becomes interested and engaged."

For the American Agriculurist.

Cone's Dynamometer.

Gent.—I send you a rough drawing and description of a very cheap, simple, and effectual Dynamometer. Every farmer can have one if he chooses; the only thing is to hit upon some plan to have them uniform throughout the Union.

Mr. Cone exhibited his plan at the Genesee Cattle Show and Fair, in October. The time was so short, however, after the plowing match was over, that it could not be applied to any of the plows. It was sufficiently tried, however, to satisfy any one as to its accomplishing all that could be required of the most perfect instrument.

Take the beam of any patent scales that will weigh as high as 10 or 12 cwt. Suspend it by the upper hook, and put sufficient weight upon the lower hook to balance the beam. Then hang upon the small end a one pound weight, and put sufficient weight upon the lower hook to balance. Ascertain the number of pounds upon the lower hook requisite to balance the one pound: The beam used by Mr. Cone required 32 pounds on the weight hook to balance one at the small end. Hitch the lower hook to the clevis of the plow, and the beam to the upper hook. The small end runs out upon the land side, at right angles to the plow. From the small end of the beam bring a wire near to the handle of the plow; attach to this wire the upper end or hook of a common spiral balance, and make the other end of the balance fast to the plow. *The spiral balance becomes the index to the force required to move the plow.* Thus if the index of the balance marks 14 pounds, then the force exerted on Cone's scale would be 14 X 32 = 448 pounds.

You perceive at a glance, that the principle is perfect. It brings the index directly under the eye of the plowman, and it is easy of application to any other subject, when it is desirable to ascertain the force necessary to move a ponderous body.

In applying it to a plow, it should be so constructed as to work perpendicularly instead of horizontally. This could be done by having a guide made fast to the beam, in which the beam of the Dynamometer should play. The balance could then be made fast to the upper slat or round of the plow, and be more convenient for observation; besides it would not be affected by any inequalities on the surface of the ground.

Unless some person takes up the subject, I fear we shall not have a uniform scale. I wrote to Mr. Ellsworth, the Commissioner of Patents, asking him to give the dimensions, and then we should have it uniform throughout the Union. If no other person does it, I will prepare one by the first of February.

Sincerely yours, T. C. PETERS.

Darien, N. Y., Dec. 1842.

We are much obliged to Mr. Peters for his clear description of the above invention of a new Dynamometer, which we have no doubt is the most simple and exact yet constructed. We would have gladly accompanied the description with an engraving of the drawing, but could not get it ready in time. As we passed through Batavia, on our way here, last month, Ambrose Stevens, Esq. gave us a verbal description of the same invention. We wish some of our ingenious mechanics, after reading Mr. Peters' letter, would send us a model, or at least a complete drawing of this Dynamometer, together with any improvements which they could suggest.

In the London Farmer's Magazine for November, we find Mr. Clyburn, of Uley, has improved the old Dynamometer, by adding a recorder, to determine the draught of the plow, which is thus described:

"It consists of a sheet of paper, wound on a cylinder, which revolves as the plow proceeds. This sheet unwinds, and being marked by a pencil attached to the index of the instrument, carries away on it an irregular line, which represents all the variations in the draught of the implement.

"After two or any other number of implements have been successively tried, the Dynamometer may be detached, and the paper, on being unwound, will be found to have marked on it a series of lines, each corresponding to its own implement, and expressive of its draught. A comparison of these lines will determine which of the implements was lightest, and which was heaviest in this particular."

FOREIGN AGRICULTURAL NEWS.

The late arrivals from Europe have brought us our regular files of Journals and Magazines, for November and December, and we make a hurried condensation of a few of the articles.

Draining.—In the London Farmer's Magazine for November, Mr. Rutley, in a speech before the Maidstone Farmer's Club, states that he cheapens draining, and saves half the expense of tiles, by digging the drains twice the usual depth, but double the usual distance apart. His reasoning is, that the descent of the water from the centre to the drains in both cases is the same; and he finds his method safer, and equally, if not more effectual, than the one formerly practised, even in stiff clay soils.

Loss of Ammonia by use of Lime. Salt and Lime for killing Seeds of Weeds.—A writer on manures, in the West Briton, contends that if unbleached wood ashes or quick lime is mixed with dung, it drives off the ammoniacal vapor which is contained in it.

As ammonia is the most fertilizing part of manure, and especially necessary to perfect the seeds of plants, it cannot be too much guarded and preserved. Those farmers who have been in the habit of mixing unslacked lime with their manure, will now see that they have committed a great error, and subjected themselves to a heavy loss.

The same writer asserts, that four gallons of salt, and eight gallons of lime, mixed with two loads of weeds, are sufficient to kill all the seed in them.

American Pork, Hams, and Lard.—A correspondent in the Liverpool Albion affirms, that he finds American *pork*, recently imported there, sweeter and better than English; he also states that American *hams*, sent down the Ohio, via New-Orleans, are equal to the famous Westphalia. For the former he is charged 6*d*. per lb., for the latter he paid 9*d*.; the Westphalia ham being 50 per cent. higher than the American. He attributes the superiority of the American pork to its being fatted on Indian corn.

We know from our own taste, that Ohio hams, particularly those cured at the best packing houses in Cincinnati, such as Mr. Neff's, for example, are equal to the best European; and as for pork, we never eat anything which possessed more sweetness than the well-fatted American.

Lard.—The above writer also highly praises and recommends to the English to use it in frying fish. We are surprised to hear that they never practised this delicate method of cooking fish before!

A great hue and cry has been got up against cheap American provisions, by those opposed to their introduction, in order to prejudice the British public against them; but they will not succeed. When our meats of all kinds, beef, mutton, and pork, are properly fed and cured, they are equal to any in the world; and now that British duties are reduced upon them, we shall look for a large exportation, and a great increase of wealth from this source to our country.

Chemical Laboratory.—Earl Ducie has introduced a chemical laboratory into the farm house of his example farm, as one of its permanent fixtures; not only for the purpose of analysing soils, but also to assist in manufacturing and testing the qualities of different manures.

Farmer's Clubs.—In the December number of the London Farmer's Magazine, we find a proposition for establishing a Farmer's Club in London, where all who come up there on business or pleasure may form a re-union, on the same plan as at other club houses, or something like our own reading rooms; except that the clubs are more extensive and varied in their accommodations, having conversation, dining, and other rooms attached to them. This would not be a bad idea to act upon in this city. Will the American Institute think of it?

Azote.—Mr. Edward Addison has broached what he calls a "new theory of the action of azote," which we may more particularly allude to hereafter. He contends that it is very necessary to supply it in sufficiency to the soil, so that it may convert larger quantities of the carbon of the soil and atmosphere into grass, grain, and root crops; for he believes that azote is the principal element which nature makes use of in procuring food for plants. We have looked in vain through his article for any experiments or facts to support his "new theory."

Criteria of Breed in Prize Animals.—Mr. George Drake proposes to the Royal Agricultural Society to erect a *standard of character* for every class of stock to be exhibited hereafter for premiums; also a *stnndard of form*, and every point necessary to constitute a *perfect* animal, to be noticed according to its importance, and have its proper influence in the decision of the judges—and much more to the same purpose: but as this subject was proposed and fully discussed by ourselves, as long ago as in the August number of this paper, for the regulation of American Agricultural Societies, we need not quote further from Mr. Drake's communication. We are glad, however, to find ourselves seconded by such high authority, and are more and more satisfied every day we live, *that no fixed scientific improvement* will take place among the great mass of breeders, till some such rules are established.

Corn Trade.—In his reviews of the corn trade, the Editor is particularly fierce against the new British Tariff, which now permits the introduction of American meat and flour more freely into England; and he declares so emphatically, that "our field laborers cannot compete in cheapness of living with the *helps* of America," it causes one to smile at the apparent misery of the man; more especially when we consider, that ever since we have become a nation, we have been England's best customer, and that the balance of trade from this quarter has generally been largely against us.

Count De Gourcy..—The Editor continues in the December No. his translation with notes, of the Agricutural Tour in England and Scotland, of the Count de Gourcy. The style is easy and conversational, and the remarks of the Count in his travels are generally quite correct. He is, however, somewhat credulous in setting down for *facts*, pretty much all John Bull happened to tell him; but we cannot much wonder at this, when we consider how finely he was feasted from place to place. His Journey in England must have been quite a gala day to him.

But we have no further room for foreign summary, and must forbear notice of New Farmer's Journal and other periodicals, till February No.

To Correspondents.

The unavoidable absence of the Editors from town, the greater part of the last month, has prevented full attention to our correspondence, and several favors are necessarily postponed till next nnmber; nor have we had time to give a private answer yet to such as demand it. We hope to be able to finish all up the ensuing month.

Col. William Moore of Winnsborough, South Carolina, wishes to know about the May Wheat. Will Mr. Harmon have the goodness to reply to him direct, or to us, stating his prices at home, and delivered in this city, for all his varieties. His memorandum, if left here, has been mislaid. The Silkworm Eggs are inquired for, and all other matters, and Col. M. will be written in a few days.

Editor's Table.

Our thanks are due to John Caldwell, Esq. for his Address at the Orange County Fair.

Dictionary of Arts, Manufactures, and Mines, by Andrew Ure. Illustrated with 1241 *engravings*.—We are indebted to Messrs. Appleton & Co. for the 21st and last number of this able and useful work, from which we have repeatedly selected during its progress through the press. These enterprising publishers now propose a re-issue, in five monthly parts, at $1 per part, of 300 pages, with an average of 250 plates to each. It is neatly printed, with clear type, on fine white paper, and seems to us, with so many engravings, amazingly cheap.

The Natural History of New-York. Part I. Zoology. By James E. Dekay.—The Messrs. Appleton have also called our attention to the first vol. of the series of the State publications, from the recent Geological survey. It is a large quarto, beautifully printed, from the press of T. Weed, State printer, and contains about 40 splendid lithographic engravings, illustrative of the Mammalia of New-York, executed by Endicott, of this city. The reputation of its author is a sufficient guarantee for the literary and scientific character of the work. Our learned, accomplished, and indefatigable Executive, Governor Seward, has given an introduction of nearly 200 pages, full of instructive matter, connected with the State and its institutions. The whole series, when complete, is intended to give a connected and enlarged view of the National History of New-York, and will form a proud monument to the enlightened policy and liberal spirit of our citizens. May other States follow this example.

Sale of Durhams.

We understand that Mr. George Vail, of Troy, has sold to Mr. J. F. Scribner, of Sheldon, Vermont, a fine Durham cow, and bull calf, by his Duke of Wellington, for whose portrait and pedigree, which are exceedingly rich, see December No. of this paper. Mr. V., has also sold other Short horn stock the past year into Vermont, and the north part of this State, of all which it rejoices us to hear. Our dairy and grazing farmers in that region, may depend that they can resort to no animals with a greater prospect of success in improving their native breed, than to Durhams; and in making selections for this purpose we recommend such as are of medium sizes, and especially those possessing fine bones. In this last particular, as well as other good points, we know Wellington to excel.

On the Inorganic Elements of Plants.

This is Part II, of the Lectures, on the application of chemistry and Geology, to Agriculture, by Professor Johnston, of England. We have not had time to read this work, but from the acquaintance we have with the preceding lectures, we have no doubt that this is equally able and searching. Professor Johnston has a happy style, and endeavors to make it as popular as possible, by using no more scientific terms than are absolutely necessary to express his meaning, and these he explains in advance. It is handsomely re-printed by Wiley and Putnan, from the latest English edition.

Messrs. Wiley and Putnam have politely called our attention to the magnificent folio, now complete in 14 Parts, of Professor Lows Illustrations, of British Domestic animals, embracing the horse, ox, sheep, hog and goat. The plates are beautifully colored after nature, and are about 50 in all. The price of the whole work, is $80.

☞ Several other publications were handed in, bu too late to be noticed this month.

REVIEW OF THE MARKET.

Prices Current in New-York, December 31, 1842.

ASHES, Pots, per 100 lb.	$5 50	to	5 75
Pearls, do.	7 50	..	7 75
BEESWAX, Yellow, per lb.	29	..	29½
COTTON, Louisiana, do.	6	..	10½
Upland, do.	5¾	..	9
Florida, do.	6	..	9
Alabama, do.	6	..	10
FEATHERS, American, live, per lb.	25	..	30
FLAX, American, per lb.	8	..	8½
FLOUR, Northern and Western, via Erie Canal, per bbl.	4 62	..	4 87
do. via N. Orleans,	4 62	..	4 75
Southern, per bbl.	4 50	..	4 87
RYE, per bbl.	3 00	..	3 25
MEAL, Corn, per bbl.	2 50	..	2 62
do. per hhd.	12 25	..	13 00
WHEAT, Western, per bushel,	90	..	1 00
Southern, do.	70	..	80
RYE, Northern, per bushel,	58	..	60
CORN, do. do.	52	..	54
Southern, do.	49	..	53
BARLEY, per bushel,	48	..	50
OATS, Northern, per bushel,	31	..	32
Southern, do.	23	..	24
PEAS, Field, do.	86	..	1 15
BEANS, White, per bushel,	1 21	..	1 43
CLOVER SEED, per lb.	6½	..	7
TIMOTHY SEED, per tierce of 7 bu.	10 00	..	10 50
FLAX SEED, rough, do. do.	8 50	..	9 00
clean, do. do.	---	..	---
RICE, per 100 lb.	2 87	..	3 12
HEMP, Russia, per ton,	210 00		215 00
American, water rotted do.	280	..	—
HOPS, first sort, per lb.	10	..	12
LEAD, Pig, per lb.	3¼	..	3⅜
Sheet and Bar, per lb.	4½	..	5
OIL, Linseed, American, per gal.	80	..	82
PLASTER OF PARIS, first quality, per ton,	2 25	..	2 75
unground do.	1 81	..	1 88
BEEF Mess, per bbl.	6 12	..	6 75
Prime, do.	2 75	..	3 50
Cargo, do.	1 75	..	2 00
PORK, Mess, do.	7 50	..	9 50
Prime, do.	5 00	..	6 50
LARD, per lb.	7	..	8
BUTTER, best Table, per lb.	13	..	15
Western, good, per lb.	10	..	13
Shipping, do.	6	..	8
CHEESE, in boxes and casks, per lb.	5½	..	6½
HAMS, Smoked, per lb.	7	..	9
Pickled, do.	—	..	—
Shoulders, smoked	—	..	--
BEEF, Smoked, do.	6	..	7½
SALT, Liverpool, ground, sack	---	..	1 47
do. fine, do.	1 62½	..	1 76
SUGAR, New Orleans, per lb.	4	..	5½
TOBACCO, Virginia, do.	3	..	5
Kentucky, do.	2½	..	5
TALLOW, American, do.	8	..	8¼
WOOL, American Saxony fleece, per lb.	32	..	37½
Full blood Merino do. do.	28	..	30
Half to three-fourths do. do.	24	..	26
Native to half do. do.	18	..	22
SHEEP PELTS, each,	---	..	—
HAY, per 100lb.	56	..	62½
POTATOES, new, per bushel,	25	..	---
EGGS, per 100,	1 00		---

REMARKS.—Ashes, Cotton, Flour, Wheat, Oats, Beef, and Lard, have slightly advanced since our last; while Corn Meal, Rye Flour, Corn, Rye, Flax Seed, Linseed Oil, and Sugar, have slightly fallen. Hemp, there is but a light stock of Russia here. Money is abundant, and Specie accumulating in our Banks. Good City Paper is readily discounted, and Stocks are firmer; and altogether a better feeling with business men, although no material changes can be announced. At New Orleans, they have a light stock of Lard on hand. At Cincinnati, upwards of 70,000 hogs have been already slaughtered; but notwithstanding this unusually large number, pork had slightly advanced and was firmer. Several houses there are packing for the English market, and we are of opinion that no great surplus of meat will be left on hand after the season is over, as has been the case the two past years.

New York Cattle Market—Dec. 26.

At market, 825 head fresh Cattle—100 from the South; 30 Cows and Calves, and 800 Sheep and Lambs.

PRICES—BEEF CATTLE.—Owing to the holidays, prices are not quite so firm as last week, and the sales are from $3 50 to 6 for best cattle.

Cows and CALVES—All at market taken at 21 to 35 dollars.

Sheep and Lambs—All sold at $1 50 to $4 for Sheep, and 1 to $2 25 for Lambs.

Works pertaining to Agriculture for sale by Saxton & Miles, 205 Broadway.

Johnson's Elements of Agricultural Chemistry and Geology, 50 cents; Do. do. 1 vol. 12mo. $1; Gray's Botanical Text Book, $1 50; Lindley's Horticulture, $1 25; Gray's Agricultural Chemistry, $1 00; Downing's Landscape Gardening, $3 50; do. Cottage Residences, $2 50 Leibig's Organic Chemistry, $1 25; do. Animal Chemistry, $1; Buel's Farmers' Companion, 87½ cents; Fessenden's Complete Farmer, 87½ cents; Cobbett's American Gardener, 75 cents; Blacklock's Treatise on Sheep, 50 cents; The American Farmer's Instructor, $1 62; A Treatise on Cattle, $2 50; Dana's Muck Manual, new edition, 62½ cents; Boswell's Poultry Yard, 50 cents; &c. &c.

Orders from any part of the United States punctually attended to, at the **cheap cash book store, 205 Broadway**.

Wanted—A Person who understands the rearing of Silk Worms, and reeling Cocoons, to go to South Carolina, to manage a Mulberry orchard of 6000 trees on shares. For further particulars, address *post paid*, the Editors of this paper, stating on what shares the applicant would be willing to manage the above.

CHARLES STARR, JR.,
MENDHAM, MORRIS COUNTY, NEW JERSEY,

Will be prepared, the coming Spring, to execute orders for thorough bred Berkshire Pigs, from the imported boar Hagbourn, and a superior boar of Windsor Castle family, and fifteen choice sows, lately procured from A. B. Allen, of Buffalo, New York.

Pigs from this superior stock, from 2 to 3 months old, will be delivered, well caged on shipboard, at New York, for $25 to $30 per pair. Feed furnished when desired at $3 per barrel.

Persons desiring either pigs or full grown animals, can be supplied with all the advantages of Mr. Allen's stock at Buffalo, without incurring the risk and cost of canal transportation—the advertiser's residence being but half a day's journey from New York.

ORCHARD GRASS SEED FOR SALE.

The Subscriber offers for sale Seed of the best quality of the above valuable variety of Grass, at $2 50 per bushel. Apply to ROBERT WHITE, JR., Shrewsbury, New Jersey, or the Editors of this paper.

SHEEP FARM FOR SALE.

The Subscribers offer for sale, or to let, their extensive Sheep Farm, situated in La Salle County, State of Illinois. The Farm consists of upwards of 1500 acres, over 400 being enclosed by substantial picket fence, and improved; the balance dry rolling prairie and timber, most admirably adapted to sheep husbandry, for which purpose it has been used by the Subscribers for the last two years successfully.

The Flocks of Sheep can be sold at the same time, if purchasers are inclined. They consist of over 1500 good strong healthy white-faced Cheviot breed; also two fine Paular Merino bucks, lately purchased of a celebrated breeder at the East

If the Farm cannot be sold for cash, offers will be received for renting the same for two or three years. Apply either to JOHN ROSE, Little Vermillion, La Salle, MURRAY & WARD, Chicago, Ill., or JAMES MURRAV & Co., Buffalo, New York, either of whom will give every information wanted.

CONTENTS OF THIS NUMBER.

Editorial.

Address to our Patrons, 289
Tour in England, No. 9—English Horses, 290
Cultivation of Hemp, 292
New British Tariff, 294
Value of a Home Market, } 297
The Pork Business of the West, }
Protection of Coarse Wool, 299
December Notes from Buffalo to New-York, 301
The Times and Prospect of the Price of Agricultural Products, 304
Work for the Month, } 305
Annual Meeting of the N. Y. State Agricultural Society, }
To Kill Lice on Cattle and Hogs, }
Copying Articles without Credit, } 306
Orchard Grass, }
Sisal Hemp, 307
Wild Bees, 308

Original Correspondence.

Ladies Department.—To make Souse, Remedy for Fevers, }
Cure for Cough, Dough Nuts, } 308
A. Beatty, Cultivation of Corn in Kentucky, }
D., Genesee County Fair, 311
Solon Robinson, Fairs in the West, 312
Wm. Partridge, City Manures, 313
R. H. Hendrickson, Corn in Ohio, } 314
John Meadows, Technical and Scientific Terms, }
James M. Garnett, Chemistry, Translation from the French, 316
C. M. Vaiden, Gin Bands, }
Doctor Phillips, Wool, Produce, } 317
T. C. Peters, Cone's Dynamometer, }
Foreign Agricultural News, 318
To Correspondents, } 319
Editor's Table, Review of Books, Sale of Durhams, }

V. L. DILL, Stereotyper, S. W. BENEDICT, Printer.

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.-- *Washington.*

Vol. I. **New-York, February, 1843.** **No. 11.**

A. B. Allen, and R. L. Allen, Editors. Saxton & Miles, Publishers, 205 Broadway.

THE AMERICAN AGRICULTURIST.

will be published Monthly, each number to contain thirty two pages royal octavo.

Terms.--One Dollar per annum, payable strictly in advance.

Six Copies will be sent for $5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside.

Thirteen Copies will be sent for $10, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, post paid, No. 205 Broadway, New-York.

☞ **Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.**

Each number of the Agriculturist contains **but one sheet, and will therefore be subject to newspaper postage only,** which is **one cent** in the State, or within 100 miles of its publication, and **one and a half cents** if over 100 miles without the State.

Advertisements will be inserted at $1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

CORN COBS FOR CATTLE.

We cannot too earnestly call the attention of our readers, in those portions of the Union where labor is cheap and feed dear, and mills are found for the purpose, to the importance of grinding or crushing their corn cobs for horses, cattle, and sheep, and when it can be, cooked for swine also. Sufficient experiments have been made to establish the great benefits of them when so used in proportion to their weight. As we before suggested, to soak the cob with the corn unshelled, in water with the addition of a little salt, will prepare them for one mode of feeding; but some will prefer grinding or crushing, which is indispensable for sheep. Boiling or fermenting them after crushing, adds to their value.

REMEDY FOR THE HESSIAN FLY.

To the many invaluable advantages of the roller, may be added the perfect security it affords to the wheat crop from the ravages of the fly. Whenever this insect is discovered, whether in the spring or fall, the roller should be applied, and the effect of one or more applications will be entirely to destroy this troublesome enemy.

CREDIT QUOTATIONS.

We quoted from Tull, under the head of "Selections," in 5th No. of our paper, on the subject of "Pulverising the soil." We find this same article in a Dec. No. of the N. E. Farmer, quoted from the So. Agriculturist, which paper credits it to the Southern Planter as original. We protest against thus robbing the dead of its rightful dues.

CULTIVATION OF HEMP.—(CONCLUDED.)

Cutting.—No after cultivation is necessary, and as soon as the blossoms turn a little yellow, and begin to drop their leaves, which usually happens 3 to 3½ months after sowing, it is time to cut the hemp; if it stands, however, a week or ten days longer than this, no other detriment will ensue except that it will not rot so evenly, and becomes more laborious to break. Cutting is now almost universally practiced in preference to pulling. Not quite so much lint is saved by the first as by the last process, but on the other hand the labor is pleasanter, and all subsequent operations, such as spreading out, stacking and rotting, are made easier. The lint also is of a better color and finer fibre; and the roots and stubble left in the ground and plowed under, tend to lighten the soil, and as they decompose, become an equivalent to a light dressing of manure.

If the hemp is not above seven feet high, it can be cut with cradle-scythes, similar to those used for wheat, (only larger and stronger,) at the rate of an acre per day; but if above this height, hooks must be used full three inches wide, of a corresponding thickness, and about two and a half feet long, something in the shape of a brush scythe or sickle, attached to the end of a long and nearly straight snath, and with these, half an acre is considered a good day's work.

Just before being fully ripe for cutting, as we before remarked, the hemp presents one of the most splendid sights in nature; and is perhaps as rich and magnificent in appearance as the sugar cane full grown, or Indian corn in tassel. The figure below is a good representation.

The Hemp Plant.—(Fig. 26.)

Drying and Securing.—As fast as cut, spread the hemp on the ground where it was grown, taking care to keep the butts even, when if the weather be dry and warm, it will be cured in three days. As soon as sufficiently dried, commence binding into convenient sheaves, and if destined for water rotting, it ought to be transported to dry ground convenient to the pools, and then secured in round stacks, carefully thatched on the top to keep out the rain; but if designed for dew rotting, it should be secured in the same field where grown in large ricks. The reason why these are to be prefered is, that less of the hemp in them is exposed to the weather, and of course the more and better the lint when it comes to be rotted and broken out.

Ricking.—To make a good rick is an important process, and for the whole manner we are indebted to an inspection of those on the plantation of Judge Beatty, and his remarks to us upon them, which we noted down at the time, and in addition to this, we also quote occasionally from his Prize Essay.

The ricks should be 30 to 40 feet long, and 15 to 20 feet wide, the best foundation for which is large rails or logs laid down for the bottom course, six feet from each other, then lay across these, rails or poles one foot apart. Now as the hemp is bound in sheaves, let it be thrown into two rows, with sufficient space for a wagon to pass between. "While the process of taking up and binding is going on, a wagon and three hands, two to pitch and one to load, is engaged in hauling the hemp to the rick, and stacking it. The rick should be in a central part so as to require the hemp to be removed as short a distance as possible. Thus the process of taking up, binding, hauling, and ricking, all progress together. In this way five hands will put up a stought rick in two days and cover it. By having two wagons and ten hands, it may be accomplished in one day. It is proper to remark, that for making the roof of the rick, it is necessary to have *long* hemp, from which the leaves should be beat off. *In this state only will hemp make a secure roof.*"

In laying down the hemp begin with the top ends of the bundles inside, and if they do not fill up fast enough to keep the inside of the rick level, add as occasion may require whole bundles. Give it a rounded eliptical form at each end, and as it rises it must be widened so as to make the top courses shelter the bottom ones, and after getting up about twelve feet high, then commence for the roof, by laying the bundles crosswise, within a foot of the edges of the rick, building the top up roof-shaped, of a slope at an angle of about forty-five degrees. This finished, for the covering of the roof lay up the bundles at right angles to its length, the butt ends down, and the first course resting on the rim of the rick as left all round, one foot in width Lap the bundles in covering the roof in courses, precisely as if shingling a house. The first shingling thus finished, commence the second by reversing the bundles, placing the top ends down, and then go on lapping them as before. The third course of shingling begin with the butt ends down again, letting the first course hang at least one foot below the edge of the roof, as eaves to shed off the rain well from the body of the stack. Unbind the bundles, and lay the covering at least one foot thick with the loose hemp, lapping well shingle fashion as before, and for a weather board, let the top course come up above the peak of the roof about three feet, and be then bent over it, towards that point of the compass from which the winds blow least. If the work has been faithfully performed, the rick may be considered as finished, and weather proof, and it requires no binding with poles or anything else.

Judge Beatty is opposed to leaving the hemp standing in the field in shocks, and adds emphatically: "I am satisfied from actual experiment, (having tried all these different methods,) that the best way of managing hemp after it is cut and cured, is to bind and rick it as herein before described, without beating the leaves off except for the cover."

We will add, that the rick should be made when the weather is settled and certain, for if rain falls upon it during the process, it will materially injure the hemp. There ought always to be a sufficient number of hands in the field to gather, bind the shocks, and finish the ricking in a single day.

"If the hemp be well cured, and ricked when perfectly dry, many of the leaves will shatter off in the process of ricking. Most of those remaining on the hemp will shake off when it is hauled out, and spread [for rotting]. It is an advantage to have the leaves pretty well separated from the stalks before, or at the time of spreading out to rot. But this object will be sufficiently attained by the handling of the hemp, in the different processes of binding, ricking, hauling out, and spreading.

"There is a difference of opinion also, as to the best ground upon which to spread hemp. Some choose meadow ground in preference to any other place. I formerly pursued that practice, but have abandoned it from a perfect conviction, that the ground upon which hemp grows is the most suitable place to spread it for rotting.

1. "This saves much time in ricking, as the ricks may always be on the ground on which the hemp grew, and as nearly central as may be to that part of the hemp which is to be put in the rick.

2. "All the manure arising from the leaves, half-formed seed, &c., will be left on the ground.

3. "The hemp rots or is watered quicker, and more regularly than it does on grass.

4 "If spread on hemp ground, you are sure to guard against stock running there, and the ground is consequently kept in good condition for another crop. Besides, the ground is benefited by being covered with the hemp while rotting.

5. "If spread on meadow ground, much of the grass will be injured by burning the hemp shives, and if the hemp is not sufficiently *watered* before the grass springs up among it, it will not obtain a good rot, and may be seriously injured.

Time of Dew Rotting.—Judge Beatty considers that the best time for spreading hemp for dew rotting, is in the month of December. "It then receives what is called a winter rot, and makes the lint of the hemp a light color, and its quality better than if spread out early. But where a farmer has a large crop, it is desirable to have a part of his hemp ready to take up late in December, so that he may commence breaking in January. To accomplish this object, a part of his crop may be spread about the middle of October. It would not be prudent to spread earlier, as hemp will not obtain a good rot if spread out when the weather is warm."

When properly Rotted.—"The experienced hemp-grower is at no loss to tell when hemp is sufficiently watered. A trial of a portion of it on the break will be the best test for those who have not had much experience. When sufficiently watered, the stalks of the hemp lose that hard, *sticky* appearance or feel, which they retain till the process is completed. The lint also begins to separate from the stalk, and the fibres will show themselves somewhat like the strings of a fiddle-bow attached to the stalk at two distant points, and separate in the middle. This is a sure indication that the hemp has a good rot."

Shocking after breaking and Rotting.—"When hemp is fit to be taken up, it should be immediately put in shocks, without binding, of suitable size. If it is dry, the shocks should be immediately tied with a hemp-band, by drawing the tops as closely together as possible, in order to prevent the rain from wetting the inside. If carefully put up and tied, they will turn rain completely. Each shock should be large enough to produce from fifty to sixty pounds of lint. If the hemp should be considerably damp, when taken up, the shocks should be left untied at the tops until they have time to dry. If shocks are not well put up, they are liable to blow down by a strong wind. To guard against this, it is desirable, when commencing a shock, to tie a band around the first armful or two that may be set up, and then raise up the parcel so tied, and beat it well against the ground so as to make it stand firmly, in a perpendicular direction. The balance of the shock should now be set regularly around the part as herein directed. If hemp be carefully shocked, it will receive little or no injury till the weather becomes warm. In the mean time it should be broke out as rapidly as possible. If the operation be completed by the middle of April, no material loss will be sustained. If delayed to a later period, more or less loss of lint will be the consequence. Cool, frosty weather is much the best for hemp-breaking. In that state of the weather, if the hemp is good, first-rate hands on the common hemp-break, will clean two hundred pounds per day upon an average. Two of my best hands, during the past season, for every day they broke, favorable and unfavorable, averaged one hundred and eighty-six pounds. Two others, who are young men, and not full hands, averaged one hundred and forty-four ponds. The ordinary task for hands is one hundred pounds. Overwork is paid for at the usual price of breaking."

Hemp-break.—The hand hemp-break is made precisely like that for flax, only much larger; the under slats on the hinder end are 16 to 18 inches apart, at the fore-end they approach within 3 inches of each other. The slats in the upper jaw are so placed as to break joints into the lower one, as it is brought down on to the hemp. It is a machine so common, however, that we deem further description unnecessary. After breaking out the hemp, it is twisted into bunches, and sent to the press-house to be baled, and is then transported to market.

Water Rotting.—Of this process we gave a full description in October No. of this periodical. Some recent improvements, it is said, have been made in water rotting, and a new discovery of rotting by steam, which we are informed, accomplishes the process in a few hours. We are somewhat doubtful on this point, and have instituted inquiries regarding it, which, if of any practical utility, we shall immediately make them known.

We desire greatly to see our country an exporter rather than importer of this valuable product, and with her boundless regions of fertile soil she may be. The value of hemp and hempen manufactures of all kinds, imported into this country for the five years ending 30th Sept., 1841, was about $10,000,000 value here. It would be a pretty item of National wealth to reverse the tables, and make our exports of the same articles equally large.

ANTHRACITE COAL ASHES.

We are glad to find a satisfactory answer to our inquiry as to the effects of an application of anthracite coal ashes. We have not for many years been engaged in farming occupations, in the region of the consumption of anthracite coal, and of course have not had an opportunity of testing the value of the ashes from personal observation, and having noticed they were universally wasted in our city, we made many inquiries as to experiments with them, and of some sustaining a high reputation as agriculturists, and the reply was universally, their effects were not known, but they are believed to be prejudicial. Entertaining an opinion just the reverse, we made a public call for information, and we give below the substance of a reply from the editor of the Am. Farmer.

"In the spring of 1836, we had a small piece of ground bordering on the main road, which was separated from the field by a run. It contained 1 acre and 10 perches of as hard, elastic, ungainly clay as Christian man ever undertook to improve. Its situation was a western exposure, rising gently to the east, so as to form a kind of inclined plane. The eastern part of it was a tenacious white clay, bordering on fuller's earth; the rest a red clay, equally hard, and the whole worn out by that improvident system of culture, which looks to taking all out and putting nothing in. As it was located on the public road, we were not a little ambitious to get it in good tilth, so as to relieve us from so burning an eye-sore. From its indurated condition we felt conscious that before we could bring it to a condition of creditable fertility, it would be necessary to change the texture of the soil, in order to give play to the action of the atmosphere. Had a sand bank been accessible to us, we should at once have covered it with sand, at the rate of a hundred cart-loads to the acre, so as to break down its tenacity, and admit the air. But having no such resource at hand, we determined on applying what we believed would be a good substitute, and accordingly procured gas house cinders, which we intended applying at the rate of twenty double-horse cart loads to the acre. As the westernmost part of the ground lay convenient to the entrance, the cinders were spread thereon first, but as we could get but twenty loads, only one acre was furnished with them, so that the upper part of the piece, consisting of the white clay, and containing 10 perches, was left uncovered. After spreading these cinders, we put on and spread stable manure at the rate of twenty double-horse loads to the acre. The manure was plowed in as spread, the ground then rolled to break down the clods, harrowed twice lengthwise, and once crosswise, which brought it but to a tolerable state of pulverization. We then sowed millet on the whole piece, at the rate of half a bushel of seed to the acre. It came up well, and on that part where the gas house cinders were spread, the crop of millet was as luxuriant as the heart of man could desire; but, to a line, where the cinders stopped, the plant was as thin as its growth was stinted and poor—scarcely worth cutting. This difference in product we ascribed to the utter impossibility of the roots of the plants deriving any benefit from the air, and but partial from the *rain*, as the *baked* condition of the clay almost precluded the operation of percolation, and the water stood in puddles on the surface, although this part of the ground was the most elevated. Our object being to get the piece in timothy, as soon as we cut the millet, we spread 20 bushels of anthracite coal ashes on the 10 upper perches described, plowed it in about four inches, rolled and harrowed, and left it in that way until it was time to prepare the whole for the timothy. We then had the whole plowed 7 inches deep, rolled, and harrowed until we had pulverized it as well as it was susceptible of being made so. On the upper 10 perches, we spread 20 bushels more of anthracite coal ashes, which we harrowed in well. We then sowed a peck and a half of timothy seed on the whole piece. It all took equally well, and yielded luxuriant cuttings of fine grass, there being no difference on the piece except that the part where the coal ashes had been appled, had a good carpet of white clover, whereas there was but little or none on the rest.

"Finding that its action as above described had answered our expectations, in the spring of 1837, we topdressed an acre of clover with it. It grew on a piece of cold red clay, in bad tilth. The piece consisted of 2 acres. One half of the remainder of the piece was plastered, at the rate of a bushel to the acre. Where the anthracite coal ashes and plaster were sown, the clover was as fine as we ever saw, but on the remainder of the lot, it was poor enough in all conscience. We subsequently put this lot in spring wheat, turning in the clover sward the previous fall, late, and sowing the wheat early, the ensuing spring; the product was good on the whole, but better where it had been plastered and ashed, and much the best on the latter part. The subsequent year we put the whole piece in Mercer potatoes, manuring all alike and well, in the furrows; the product was good, but decidedly best where the ashes had been applied.

"In the spring of 1838, we put in 3 acres of corn, in a lot, *manuring the whole*, at the rate of 20 double horse cart loads of stable and barn-yard manure to the acre. On one acre we spread 100 bushels of leached ashes, on another we spread 100 bushels of anthracite coal ashes, and on the third, nothing. The soil was a sand, inclining to loam, resting upon a clay bottom. The corn proved a fair yield, but much more productive on the ashed part, which yielded at least one-fourth more. It grew faster from the start, looked greener and healthier, and made more and larger ears.

"In the spring of 1839, we planted a small bed of the *famed* 'Tree Corn' in our garden. The plot on which it grew lay low, and was too wet in rainy seasons for corn, but as it was the only spot which we could appropriate to it, we thought we would overcome its inadaptation by heavy manuring. We spread on 4 inches in depth of stable manure, had that trenched in 9 inches deep, then had 2 inches of cow-dung spread thereon and turned in 4 inches deep, raking the ground well after each spading. We then spread on 2 inches of street dirt, which we thoroughly raked in, so as to incorporate it with the soil. We then laid off our beds in furrows 3 feet apart, and dropped the corn 2 feet asunder in the rows. It came up well, but owing to a succession of cold rains, the plants turned yellow and appeared evidently dying. Judging that it was owing to the cold, and that it would be necessary to impart heat to the soil, so as to counteract the effect of the cold, we applied half a pint of anthracite ashes to each hill, working it in with the prongs of a small garden hoe. The consequence was, that it acted like magic, changing the color of the plants in a few days, from a sickly hue to a dark healthful green. The plot of Tree corn yielded a tremendous crop, the which we, in chief, ascribed to the plentiful dose of manure which we gave it, but at the same time, we believed that the anthracite coal ashes rescued it, at the onset, from the fate of stunted corn, and performed its office in its subsequent growth.

"We used them in a compost of barn-yard and stable manure in 1839, at the rate of 100 bushels of ashes to 20 cart-loads of manure, with which we dressed an acre of sugar beets. The crop was a good one—the soil a rather moist clay loam, resting on hard till."

We shall be pleased to add further experiments of their utility, which we have no doubt can be furnished from our immediate neighborhood. These ashes make a large item in the waste of our city. They might be saved with the least possible trouble, by having a large box with a lid, in the centre of every block on the pavements by the gutter, in which every citizen should be *compelled* to put his ashes, instead of throwing them into the street, and these might be sold by the season or quantity to farmers who would gladly buy them at a round price.

CROPS FOR SOILING.

We have been repeatedly called upon by persons residing in this vicinity, who keep cows for the purpose of supplying the city with milk, and fat a few sheep and other animals for market, making inquiries as to the best system of pasture and soiling, as land is too dear in the neighborhood, and it takes too much of it laid down in common pasture, to keep their animals with much profit. As well as we are capable of giving advice, our method for soiling would be this:

When the land is suitable for rye, we would sow it early in September, so as to have it get a good start before winter. This would come forward a fortnight, if not three weeks earlier than any clover or grass, of which we have any experience. If the soil suits wheat better than rye, then we would sow wheat for this purpose. It comes forward quite as quick in the spring as rye, and is considered better green food; but after the cattle are withdrawn from it, the wheat does not grow and head as well as the rye, and it is consequently not so good a crop to harvest, or turn hogs on to when the grain has ripened.

After the rye and wheat fields had been pastured about three weeks in the spring, we should have a pasture which had been stocked down the previous year, with orchard grass and clover to succeed them. By the time this began to grow short, say about the first of July, Indian corn sown broad-cast, would be ready for soiling, and this, by proper management may last till the grass has become well grown again in the fall, or till winter sets in. In order to effect this desirable object, different varieties of corn should be sown. We would first commence with the earliest Canada, taking the risk of frost, and sowing a single acre or so as soon as we could prepare the ground for it in the spring. Then at the earliest usual time of planting, we would sow different ripening varieties, from the earliest to the latest. We would repeat the Canada in one patch by itself; then in another patch sow the Dutton or some good summer variety; then a patch of the China tree; and finally the Baden. These two last varieties yield more fodder than any which we have cultivated; and though many object to them for grain, we think they will prove excellent varieties for soiling. As the above varieties ripen from three to six weeks apart, they may be all sown at about the same time, and then will be fit for cutting in regular succession. We should be careful to sow them in distinct patches and never together, as corn ought to be in tassel before cutting to feed to cattle, otherwise it will badly scour them, and prove injurious rather than beneficial food. It would be still better to reserve cutting till the ears were large enough for roasting; but in either event, and indeed during the whole process of pasturing and soiling, the stock ought to have salt always accessible, where they can eat as much as they please of it. A trifle of alum mixed with the salt is an excellent thing, and to have the troughs well covered with tar is very healthful, and indeed the best preventive of disease of any thing we ever tried.

Vetches are much used in England for early spring food, and our opinion is particularly asked about them. We tried them two years. They grew well and yielded an abundance of green food on a cold tenacious clay soil, but the seed would not ripen, and as we had to import this at a very high price, we gave them up; but we have no doubt they may be acclimated here, and if so, they will prove excellent food for soiling. Some of our friends are going to make the attempt of acclimation this year. But even what is called winter vetches, which are sowed in the fall and winter in England for their earliest green food, do not come forward so quick as rye and wheat there; and rye pastures for early spring pasture, are getting more and more into vogue in Europe. The vetch is but a diminutive sort of pea; the American pea can therefore take its place in feeding to great advantage. It resists frosts well, and we have known it sown late in the fall, or during a mild winter, for an early crop in this climate. Its vegetation, however, under these circumstances, is not always certain. We have seen quite a valuable pea for this purpose growing in the western part of this state and Canada, called the Grass pea. The stalks and leaves are smaller much than the common field and garden varieties; but they grow close together, and we think would yield more feed per acre than any other variety; and although the grain is small also, still it usually gives a large number of bushels per acre. We have seen from 40 to 65 bushels taken from an acre repeatedly, on land of a moderate fertility, and without extra cultivation, and we have never heard any other objection to it where grown, except that the grain was too small, but this we consider rather a fanciful one than otherwise. If more herbage or grain is obtained with it than from the larger varieties, why should we not give it the preference in cultivation ?

In preparing land in this vicinity for pasture and soiling, we recommend its being made as rich as possible; and in order to easily effect this, we again entreat our farmers to read attentively the valuable articles in our paper on city manures, by Mr. Partridge, as well as others which we have copiously selected and written previously. Many of them will bear a second and third perusal with profit.

If the land is made sufficiently rich with the proper materials, 3 tons of grass may be had from an acre, and its equivalent, or perhaps more, in rye and wheat; and with corn we may easily get 10 to 15 tons of the earlier varieties, and 20 to 35 tons of the later ones. We hope our friends will make some experiments on these crops the coming year, as the yield of corn per acre is involved in continued dispute. We do not think to cut a rod or two for the purpose of weighing is sufficient; we dislike *partial* experiments, when it is so easy to make a thorough one; a quarter of an acre is the least amount that should be tried, and a whole acre would be still better.

SUGAR BEET.

As much attention seems to be awarded to the cultivation of this truly valuable root, and as we have had six years' experience in growing and feeding it to stock, we shall answer all inquiries upon the subject, by giving a full account of the best method of cultivation, storing, and feeding in the March No. of our paper.

LARGE CORN CROP OF MR. YOUNG, OF KY.

As some desire has been manifested by several of our correspondents, to know how Mr. Young produced so large a corn crop as 190 bushels to the acre, alluded to by Judge Beatty, in his letter published in the January No. of the American Agriculturist, we gratify their curiosity at once, by copying it from an exchange paper. We do not recollect at this moment where it first appeared, or we should give credit for the quotation.

The editor of the Dollar Farmer recommends not planting quite so early as the 25th of March, for fear of frosts and chilly mornings at this period, even as far south as Kentucky; but as there is equal danger to be apprehended from the excessive dry weather during July, in that latitude, he is of opinion that soaking the seed in a solution of saltpetre will bring the corn forward equally early and rapidly, although planted somewhat later.

It will be seen by reference to p. 43 of May No. of American Agriculturist, that we recommended soaking corn in a saltpetre solution, previous to planting. We have frequently tested the efficacy of saltpetre in our corn crops; and for a late experiment upon this matter, by Mr. Benedict, of Staten Island, we would refer to our August No., p. 159.

"My universal rule," says Mr. Young, "is to plow my corn land the fall preceding the spring when I plant; and as early in the spring as possible, I cross-plow as deep as circumstances will permit; as soon as this is done, I commence checking off—the first way with my large plows, and the second with my small ones, the checks 3 feet by 3, admitting of working the land both ways. And then I plant my corn from the 20th to the 25th of March—a rule to which I adhere with scrupulous exactness, planting from eight to twelve grains in each hill, covering the same from *four to six inches deep*, greatly preferring the latter depth. So soon as my corn is up of sufficient height, I start the large harrow directly over the rows, allowing a horse to walk each side; harrowing the way the corn was planted; and on land prepared as above and harrowed as directed, the hoeing part will be so completely performed by this process, that it will satisfy the most sceptical. Then allowing the corn thus harrowed, to remain a few days, I start my small plows with the bar next the corn; and so nicely will this be done, that when a row is thus plowed, so completely will the intermediate spaces, hills, &c. be lapped in by the loose earth, occasioned by this system of close plowing, as to render any other work useless for a time. I thin to four stalks upon a hill, never having to transplant; the second plowing being performed with the mould-board towards the rows of corn; and so rapid has been the growth of the corn between the first and second plowings, that this is performed with ease; and when in this stage, I consider my crop safe; my general rule being never to plow my corn more than four times, and harrow once. My practice is, to put a field in corn two successive years, then grass it and let it lie eight years—a rule from which I never deviate. Now I do not pretend that the labor bestowed upon a sod field to put it in a state of thorough cultivation, does not meet with a fair equivalent from one crop; but I presume no farmer will doubt when I say the second year's crop from sod land is better than the first, with no more than one-half the labor. The best system of farming is to produce the greatest amount of profit from the smallest amount of labor."

THE AMERICAN INSTITUTE.

This truly noble and national society, has it in contemplation to open a READING ROOM at their Repository in the Park, where all the periodicals on Agriculture, Science, and Art, of any value, both in Europe and America, will be placed at all times accessible to the public. To citizens, the annual subscription for the privilege of frequenting this, will be fixed at a moderate sum; to strangers it will be FREE.

The room for this purpose will be constructed at the west end of the Repository, by laying a floor over the first story, reaching from gallery to gallery, which will afford a space of about 1,600 square feet. Contiguous to this will be the Library; and on the first floor as now, the Depository for agricultural and mechanical inventions, and any curiosity connected with them.

It is supposed that 400,000 strangers annually visit the city of New York, and among these are very many with whom the subject of Agriculture and the Arts, possess the most absorbing interest. We believe a Reading Room has never yet been established in the United States, for persons of this cast of mind; and many books and periodicals, absolutely necessary to illustrate their studies, are not within their reach, and the want of which at times, has been severely felt. The American Institute will now supply this great desideratum, and at the same time make itself more thoroughly known to the public. Some other things are under contemplation by this Institution, which, if it shall find itself able to accomplish, will tend greatly to increase its usefulness, and make it fully what its name imports—the National Society of America for Agriculture, the Arts, and Manufactures.

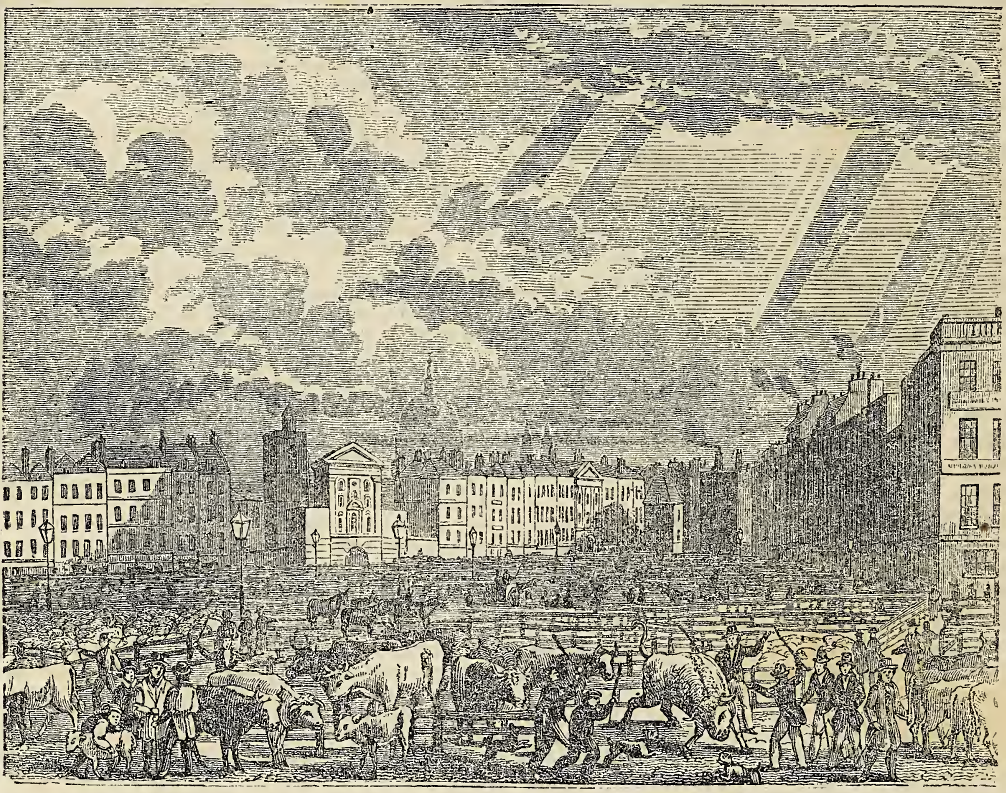
In order to render it more convenient for its southern members to attend, we have understood that it would be proposed to the Trustees, to appoint annual meetings hereafter to be holden early in the month of September, instead of October. We should think this an excellent change of time, and worthy of consideration.

AGRICULTURAL CLUB.

It is proposed to form a club in this city, to meet weekly, for the discussion of all subjects connected with farming, horticulture, and stock breeding. Such clubs have become quite common in Europe, and have been the means of accomplishing great good. We see that a few have been formed in the United States, and more are in contemplation; and as many persons as there are to be found interested in agriculture in this city and its vicinity, it is due to them to establish a club without further delay, for the discussion of all matters relative to their interests and advancement in practical and scientific agriculture.

TOUR IN ENGLAND, No. 10.

Smithfield Market—animals there, and the breeds most suitable to raise in America for meat to supply the English market.—The largest, and perhaps the most interesting market for the stock breeder to visit in Great Britain, is that of Smithfield; which in days of yore, was really what its name purports, a large *field* in the suburbs of the town, belonging to the person after whom it was named. But now the city has spread over and all around, and it has become the very heart of London. It is a sort of double oblong square, into which pour six streets, surrounded on all sides by lofty buildings, presenting something such a scene as the reader will find pictured below.



Smithfield Stock Market.—(Fig. 27.)

Smithfield is a cattle market on Mondays and Fridays; the rest of the week it is used for hay, straw, and other country products. Monday, however, is the great day, when there is a much larger show of animals than on Friday, and it is curious to see what a motley throng it then presents. Double rows of posts and strong bars morticed into them surround the open square on two sides, to which the cattle are tied, while all the rest of the space is occupied with pens for pigs, and thousands of sheep; there being a much greater consumption of mutton in England than pork. For the purpose of getting a fuller idea of the show, we usually made our visits here early in the morning, when it was so crowded, that we frequently found it difficult to move about; and such a hubbub and confusion of sounds rose up there from the voices of men, the barking of shepherds' dogs, and bleating and lowing of herds, as to almost set the fresh visitor beside himself, and half addle his head.

That the reader may have some more definite idea of the number of animals brought here for sale on market days, we give from McCulloch's Dictionary, the actual consumption in London, for the year 1830, when it had a population of about a million and a half.

		Average weight.	No. of lbs. consumed.
Cattle,	159,907	656 lbs.	104,898,992
Sheep,	1,287,070	90 "	115,836,300
Pigs,	254,672	96 "	24,448,512
Calves,	22,500	144 "	3,240,000
Number of pounds of meat consumed,			248,423,804

The average price of meat here is about 6*d* per lb., which would make the value of what was sold in 1830, within a fraction of £6,210,600.

In the edition of McCulloch for 1842, he says, that the amount of dead carcases brought into London since 1830, from the facilities of steam navigation and railroads, has greatly increased; yet notwithstanding this, he sets down the sales at Smithfield market, as amounting to 190,000 bullocks, 150,000 sheep, 25,000 calves, and 25,000 pigs. We apprehend that there is a typographical error in this last item, of a cypher left out, and that he wrote 250,000 pigs. The population of London has increased one-third since 1830, and numbers now full two millions; it would therefore be fair to suppose that the consumption of beef, mutton, veal, and pork had increased in the same ratio; the average price of which, per pound, is fully equal at the present time, to that of 1830, which would make their value the past year, consumed in this great city, £8,280,800, or nearly $40,000,000; and all this is exclusive of salt meats, poultry, and fish, which would be another round item in the eating bill; and we fancy if all were counted, that John Bull would have to acknowledge to about 180 lbs. per annum, of fish and flesh consumed for each inhabitant of London; which is pretty fair feeding, as the world goes, and may well keep him in the portly condition which he so generally shows, in his land of fog and almost interminable rain.

The butchers here are a shrewd, intelligent set of men in their profession, and we noticed that they judged the stock more by handling than ours do at home. They are also more critical in considering the forms of animals, besides other niceties that we might be thought over refined, perhaps, if we entered upon their detail. They are a hearty looking race, and in moving about in breeches and white top boots, seemed generally to verify the old saying of "he that slays fat oxen should himself be fat." However, in this respect, the farmers and graziers who drove the beasts up for sale, were but little inferior in blooming health and condition to the butchers; and had the respective parties themselves been entered for a premium, and we called upon as judge, we hardly know to which class we should have awarded the first prize.

The cattle which bring the highest prices, and make the tenderest and best marbled beef, are the Kyloes, or Scotch Highlanders, a small black animal of which there are two kinds; those with horns, and those without. The average weight of these animals is from 500 to 600 lbs. They are hardy, thrifty, and tolerable quick feeders, living upon bleak mountains where other beasts would starve, and we must confess, that they are quite favorite animals in our eyes.

The next in quality of meat of any particular original breed, are the Devons; and with them we include their cognates, the Sussex. Their average weight is from 700 to 1,000 lbs. To these succeed the Herefords and Devons, averaging from 1,200 to 1,600 lbs. Now come all sorts of breeds and crosses, and mongrels; just as we see them in our own markets, without any particularly distinctive qualities, that are not found in greater excellence in one or other of the above named animals. Between the Hereford and Durhams, there is a sharp rivalry; and it is with fat cattle from these superb breeds, that the prizes of the great annual national show at Smithfield, in December, are usually taken. The Herefords have lately been more often triumphant than the Durhams; but we suspect it is more for the reason, that the coarser Short Horns are generally made steers of; the finer ones, being too valuable for this purpose, are reserved as breeders, for we can avouch from our own personal knowledge, that the beef of a fine well-bred Durham, killed at 3 to 4 years old, is equal to that of the Kyloe, or anything else of the cattle kind which we have ever had the advantage of tasting.

The English fat their animals longer and better than we do, and in that respect they are apt to be superior to ours; but since they have begun to drive the beautiful Devon cattle of New England, and the grade Durhams, and Herefords of the west, to the Bulls' Head in New York, the animals, with the exception of not being as well fed, will make a fair comparison with those at Smithfield. We think that if some of our farmers in the vicinity of large towns, would adopt a system of high cultivation and soiling, and purchase up cattle as they are driven in from a distance, for re-fatting, as a class of people called graziers do in England, that they might make a good business of it, and become serviceable both to the stock-breeder and butcher, and be the means of furnishing our markets with a superior quality of meat, to which, when the inhabitants became accustomed, they would purchase no other.

The sheep brought to Smithfield, are more generally the South Downs, and Leicesters, together with their various crosses. The South Down mutton is the best; being much leaner and more tender than that of the Long-woolled tribes, and it usually brings one penny more per pound in market.

The best breeds of swine brought up to London are from Berkshire, and these are usually sent in fresh killed. With live hogs, the market at Smithfield seemed to be nearly monopolized by a breed from Sussex, from the reason, we suppose, of the greater contiguity of this county to the market. We can't say much in favor of these animals. They have sharp backs, long noses, and large lop ears. Their color is alternate white and black, in large patches or broad belts around the body; and they are certainly a profitless race, compared with any of the more improved breeds in Sussex, and indeed any other part of Great Britain.

Since the reduction of duties on meat in England, large quantities of beef, mutton, and pork can be exported there, provided the right kind of animals are bred, properly fatted, cured, and put up for the British market. But we regret to say, that a large portion of the American cattle, as now bred, are totally unfitted to cut up for barreling Mess Beef, which is the most profitable and desirable quality for us to export; and we here give the outlines in four different positions, of a good ox, in order to convince our farmers of the truth of so strong an assertion. We also accompany these with an engraving of an animal of another kind, not for the purpose of ridiculing it, but to show the marked difference between breeds.

Fig. 28.

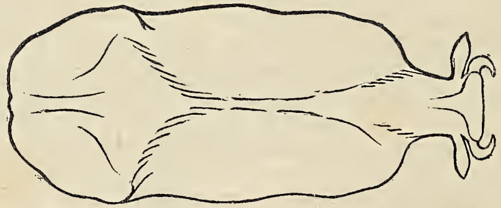


Fig. 29.

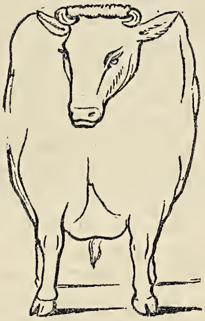


Fig. 30.

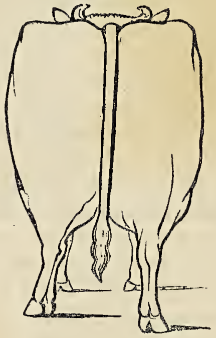


Fig. 31.

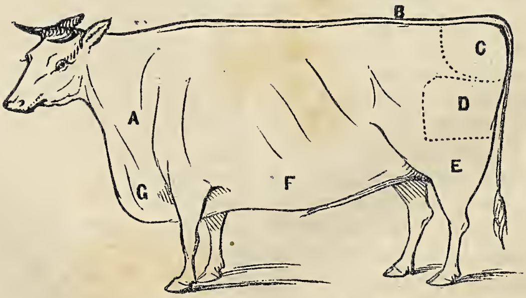
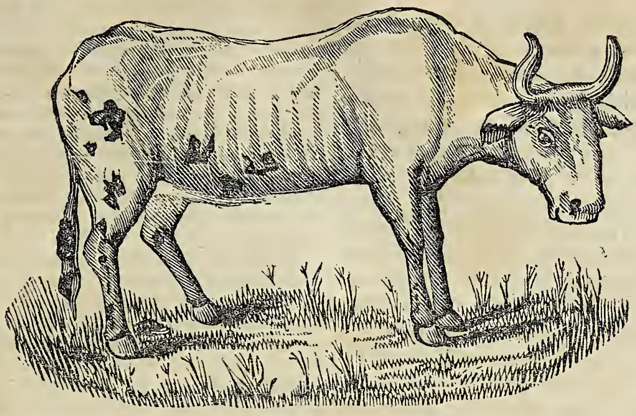


Fig. 32.



In England the most valuable pieces for Mess beef are taken from the brisket and round, *fig.* 31 D & G. Now in these two points it will be seen that this animal is especially good, and would probably cut twice or perhaps three times as much from these parts, as *fig.* 32, though it were ever so well fatted. The loin also at B, is broad and full, and here is where the steaks are cut, for which the butcher always gets an extra price. Then the plates at F, are round and thick, and this part is likewise valuable for salted beef. We now come to E, on the thigh, or gaskit, and A, on the point of the shoulder, and when the animal is as well bred as *fig.* 31, good pieces may be obtained for jerking, or dried beef; whereas, in *fig.* 32, little could be found on those points of any value, save the hide and bones.

We trust now, that we have fairly and faithfully pointed out the superiority of a good animal, and the necessity of paying attention to the breed and rearing, in order to successfully compete in so valuable a market, as the liberality of the British Government has recently laid open to us. We especially hope that our western farmers on the broad prairies will heed this matter—they can no longer object to purchasing improved stock, since the price has become so low as we understand it now is, in the United States. And they must recollect that they have but two ways of marketing their animals, barrelling them at home for a foreign market, or long, tedious, expensive driving, over the mountains to the eastern cities. We leave it to our western countrymen to say which is the best method for them to adopt.

Several houses at the west, have gone extensively into the business of packing pork for the English market, but we hear of none who have embarked in that of packing beef; indeed the Board of Trade, of Montreal, in their circulars, say, that "Mess Beef is so difficult to be procured, that as an article of general export, it is not worth attention." This is a pretty confession to make, in a country where there are Durham bulls sufficient to produce a complete regeneration in the breed of cattle, in seven years, which would then turn out Mess Beef enough from their broad buttocks and briskets, to rejoice all the poor manufacturers in Great Britain, and make their hearts glad in the eating of it.

We do not give the particulars here as to the manner of packing beef and pork; sizes of the tierces, kits, and kegs, as American papers have latterly been teeming with all such directions; and besides, the process is so minute, that it requires experienced persons to go through with it, and as soon as the tariff was altered, enough of these immediately embarked for the United States, with a view of attending to this business among us. Two very essential things are requisite, however, especially in putting up beef. 1st. That the salt be pure; 2d, that a considerable quantity of sugar or molasses be put in the brine, so as to neutralise the action of the salt, and make the meat more palatable. This is highly necessary when packed for sea stores, as sugar is a *scurvy preventive*, whereas salt is a *scurvy producer.* It also expels the nutritious juices of the meat, and the more savory particles of the fat; and at the same time, so hardens the lean, as to make it difficult of mastication, and scarcely palatable. In packing for sea stores, it would be a good thing to take out all the bones, for they only increase the weight and bulk, without any benefit whatever, whereas, if left at the packing house, they would at least make excellent manure.

Pork.—The English, hitherto, have been in the habit of eating an entirely different salted article from the Americans; the smaller kind of hogs being put up there, the side pork of which is well marbled, or intermixed with fat and lean. But we are not sure now, that we shall not soon revolutionize their tastes in this particular, and that our clear heavy mess, such as is packed for the Boston market, will not eventually take precedence there, when its superiority and goodness comes to be well tested. That for bacon, must of course have as much lean about its hams and sides as possible, consistent with juicy tenderness; but their manner of curing this kind of meat, is so entirely different from ours, owing to the difference of their climate, that we doubt whether it will be an object to prepare anything, with the view of exportation, except the choicest kind of hams; and these should be made as near the celebrated Westphalia as possible.

Mutton Hams and Shoulders.—A large trade in these, prepared and dried like venison, may be carried on with England, provided they abound with lean tender meat; and to produce this, we know nothing equal to the South Down sheep. Of these we shall give portraits hereafter. Their forms as nearly resembles the outlines of Fig. 31, as a sheep can an ox; with the same well developed brisket, wide loins, round rumps, deep twist, and fine head and legs.

Sheep and Pig Tongues.—These, if very nicely prepared, and put up in kegs of 50 lbs. each, would command a ready sale in England, at about the same price as beef tongues. Now they are almost universally thrown away at our packing houses.

LEGISLATIVE DUTIES IN REGARD TO AGRICULTURE.

We consider the Agricultural press has been altogether too remiss, in its calls upon our Legislative bodies for aid in the promotion of agricultural advancements. Wa can hardly refer our M. C.'s to the *letter* of the Constitution, authorizing the establishment of an agricultural board for the United States, and therefore we suppose our strict constructionists, must abide their time till we can get sufficient strength to insert a clause as an amendment, which event is to be looked for, about the time of discovering the quadrature of the circle, or the transmutation of the baser metals into gold. Yet we could record, with a great deal of satisfaction, the appending such a department to the Patent Office, and with an equal amount of satisfaction, witness them advancing, *pari passu*, in the promotion of the entire interest of our citizens, instead of limiting it to a part as is now done. What benefits might not result to the community of this broad Union, from the diligent selection of foreign seeds; their careful cultivation by scientific farmers; and the gratuitous and general distribution of such as on experiment were found to be adapted to increase our comfort and prosperity? The collection of the latest and best information and means of agricultural improvement, and its distribution among the citizens of the United States; the establishment of a great national school for the exclusive education of farmers; the employment of men of science to investigate and develope new principles on the subject, all these are objects which would seem to commend themselves to an assembly that once voted themselves "the most free and enlightened body in the world."

But we are dreaming. A utilitarian scheme fraught with so much substantial, *homely* benefit to their constituents, would probably be deemed altogether out of place in a body so much in advance, in this all-advancing age. We therefore forbear, and turn to our *State Legislatures*, who having the *reserved powers* resting with them, are at full liberty to consult the interests of a class which constitutes three-fourths of their constituents, and is the *foundation* of all the wealth and prosperity of the nation. To your most honorable bodies, then, we come, in behalf of those high interests we advocate, from Maine to Louisiana, and respectfully prefer our petitions:

That you would each and every one of you, organize an intelligent and efficient *board of agriculture*, which shall convene at least while the Legislature is in session, and promote by every proper means the great objects they hold in trust.

That an intelligent board for a *geological survey* shall be commissioned to go through the remotest corners of every State, and discover the hidden treasures which the all-bounteous Creator has stored up for the comfort and prosperity of his people; that they may search out coal mines; uncover the beds of gypsum and lime; probe the deposits of peat, green sand, and marl; trace up those subterranean rills of salt to the fossil beds, more rich than the mines of Poland; discover and apply successfully to the production and augmentation of vegetable life, the stores of potash concealed and locked up in the hills of mica, on mountains of feldspar and basalt; develope and make known new sources of fertility among the minerals and other deposits; and finally, analyze and classify the grand divisions of local soils, and prescribe such means for their improvement as the unlettered farmer can understand and successfully apply.

That you should delegate an *agricultural commissioner*, if that duty be not specially designated for the *board*, to go through the length and breadth of the State, and examine the present condition of agriculture; its susceptibilities for improvement; the kinds of crops and animals raised; the profits of each variety; their comparative merits with each other and those of different States; what new ones can be introduced; and finally, to publish this information and spread it through every school district and family in the State.

That you would *found an agricultural college*, and *establish agricultural schools*, and *incorporate and foster experimental farms*, which shall imbue the minds of our youth with deep, and comprehensive, and enduring principles of agricultural science. To such a body of men, thus educated, could we confidently look for the diffusion of an accurate, a general and practical knowledge of soils, manures, plants, animals, and all the objects of rural investigation, that would annually return in profits to the citizen's of the State, tenfold the total of all the expenses incurred in their education.

That you would bestow liberal bounties on the production of such articles as can be made profitable in their cultivation, but which the uncertainty of success, and the difficulties of introducing new objects of attention to a class so proverbially cautious of innovation as our farmers, render of remote and uncertain and partial introduction. Such are *water-rotted hemp* in the western states; *wheat* in the northern; perhaps *indigo* and other products in the southern; and *reeled and manufactured silk* every where.

That you would stimulate the formation of *county agricultural societies* in every county of every State in this republic; that you would aid them by liberal donations of money, to be appropriated for premiums; and require from their officers such reports, in return, as will elicit important information, and be promotive of a general improvement in the subject.

That you would encourage and aid the formation of primary agricultural cabinets and libraries in every school district, that the minds of our youth shall first dawn upon those objects we wish to make most useful and enduring in their impressions. When these preliminary steps have been taken, and well organized, we will consider what next to bring to the attention of your honorable bodies.

But to be somewhat intrusive, let us turn to our own State, and see what she has done, and subtracting this from the programme laid down, we can readily see what remains to be accomplished. And surely we shall expect great things from the *Empire State*, with its 2,500,000 of free and intelligent citizens; the centre of commerce and manufactures, enterprize and activity, literature and science; and not far behind hand in the financial and political proficiency of the day. With one arm resting on the ocean, and the other grasping the father of rivers, as it now lies in majestic repose, in the deep and cerulean beds of Erie and Ontario, or rushes on to its destination through the Niagara and St. Lawrence; with an uninterrupted navigation stretching from our metropolis through the Hudson, the Northern Canal and Lake Champlain to the utmost borders of the State; with her magnificent Erie Canal, tapping this highway at the centre and passing off at right angles 365 miles to grasp the products of the mighty west; and other canals and rail roads almost too numerous to mention; with commercial and manufacturing, mineral and agricultural resources unequalled in their richness, variety and extent by any other portion of the globe; what has this Empire done for the great cause we plead? *Answer.* She has made a Geological survey, the results of which we shall have made public soon, which will be an honor to her and the age. For this we give her all due praise. What more? She has granted $8,000 annually for five years, to be distributed among the county agricultural societies through the State, for premiums, *which is less than one-third of a cent each to every man, woman and child of the State.* Surely we cannot be overstepping the modesty of our position to ask our conscript fathers, to give us something over and beyond this small donation. They have also given us a bounty of 15 cents per pound on all silk cocoons raised in the State, and 50 cents per pound on all reeled silk. We ask no more for this item. But we do sincerely and most earnestly call on them to scan over carefully their obligations to the great agricultural community, and at once make up to them the arrears so long and so unjustly withheld from them. But the farmers have no right to complain so long as they send so many mere politicians to their legislative halls, whose only claims to their favor is to be found in their loud mouthed professions. If they will delegate to these what one of their own sound-headed body would much more effectually accomplish, they must be content to see their interests neglected, and other affairs not one-tenth part of their importance or utility, take precedence over agriculture.

DECEMBER NOTES FROM BUFFALO TO NEW YORK.

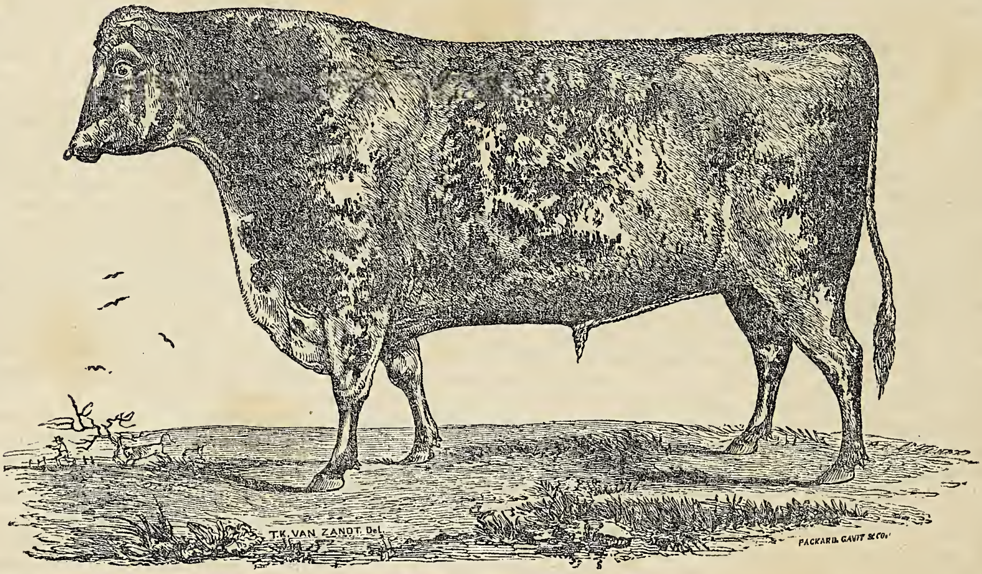
Mr. Prentice's Short Horns.—We left Auburn towards night amidst a violent snow storm, and as we got into the cars and commenced our route, we could not but console ourselves under the circumstances of the journey, and contrast them with what they would have been, had we passed here three years ago. Then we should have been obliged to have toiled along in the deep snow, in a sleigh coach, at the rate of 2½ or 3 miles an hour, half froze to death; now we were whirled off at seven times this rate of speed, and how comfortable we found it! An elegant roomy car, in which we could repose at full length if we chose; with soft cushioned seats, and cushioned backs, and cushioned sides, and the air within delightfully tempered by heated pipes. We never had much of a fancy for sleigh-riding. Jack Frost nips rather too sharply to suit our taste, especially since our cheeks have been fanned in the soft air of the luxuriant winters of the sunny south. So we gazed through the windows triumphantly at Master Jack's doings without, snapped our fingers in his face, and congratulating ourselves upon the warmth and comfort of our traveling quarters, abandoned ourselves to the enjoyment of the night; and with a carpet-bag for a pillow, and a wide thick Macintosh for a blanket, at once forgot the cares of the world, and were soon lost in forgetfulness, in that philosophic, undiscoverable country—the *land of Nod.*

How we got on in the spirit of our dream, we cannot say; but certain it is, in due time we found ourselves at Albany, with a heavy silver tea-pot in our capacious pocket, a Short Horn prize, won by, and belonging to Col. Sherwood, (for no editor need ever dream of possessing such a treasure, unless by some lucky wind-fall it should happen to come to him by way of dowery with his *better half,*) which we were bound to deliver for a model for some other matters, to the Treasurer of the State Agricultural Society, Mr. Prentice. But we did not find him at his Fur warehouse, though all know that the weather was cold enough at that time to ensure heavy sales; so we posted away for his fine farm at Mount Hope, 2 miles below, where sure enough *he was,* and right glad were we to see him, and not to be invidious, almost as much rejoiced to see his cattle too. For there was Fairfax standing out in all his noble proportions before us, with *his* Macintosh on as well as ourselves; but gentle reader, no caoutchouc about it, mind you; on the contrary, it was of the softest silky hair, and as pure and white in color, as the new fallen snow around him. We wish we had him here in a true picture to talk for himself, but we have not, and therefore we must tell the public a little about him ourselves. He was imported by his spirited owner some three years since, in his dam Splendor, and was got by Sir Thomas Fairfax, who took the highest prize in Class I, at the late annual meeting of the English Royal Agricultural Society, at Bristol; besides prizes at different times at several other agricultural shows in England, and was never beaten.

Mr. Prentice's Fairfax was the first in his class of 2 year olds, at the Annual Show of the New York State Agricultural Society, for 1842, and also at that of the American Institute, in this city, which is no small honor, considering his numerous competitors. He was two years old only last May, and has a good deep brisket, loin, and quarters, with a round barrel, and han dles well. These are the essential points in an animal; and as for the minor ones, we can tell better about them hereafter when his frame becomes fully developed. We saw two 6 months calves of his get, which resemble him exactly in color and much in shape, which is giving them sufficient praise. This blood is highly appreciated in England, for we see by a late Short Horn sale at West Rasen, that Lord Adolphus Fairfax, half brother to Mr. Prentice's F., sold for 255 guineas, ($1,200,) and not $275 as our printer's imp, by a Satanic twist of the types, made us say page 285 of our Dec. No., which we beg leave here emphatically, to straighten out and correct. At the same time, the cow Nectarine, by Norfolk, Grand Sire of Fairfax, although past seven years old, sold for 150 guineas, ($750,) while the average of Mr. Smith's stock of other blood, brought less than 33*l.* per head.

Then comes Nero; we beg pardon, here he is, or rather as he was, in his 3 year old form, for he is four past now.

Short Horn Bull, Nero.—(Fig. 33.)


T.K. VAN ZANDT. Del.
PACKARD, GAVIT & CO.

The Property of E. P. Prentice, Esq., Mount Hope, N. Y.

As we looked at him we found his added year had given him a greater stretch of horn, and developed other points, both physical, and we presume mental; for why should not a bull bred from the aristocracy (barn-yard we mean,) of Europe and America, have mental faculties, we should be very glad to know? Yet be that as it may, there he stands, and was placed first, in Class I., of bulls, at the late annual meeting at Albany, of the New York State Agricultural Society. Nero has a cross of the Patroon stock in him we believe, some account of which was given by our correspondent, Mr. Bement, in the April No. of this paper. He is a fine animal and of medium size.

An account of Mr. Prentice's cows, of which several are superior milkers, will be given in our next.

ORCHARD GRASS.

When we stated on page 307 of the January No. of our paper, that the price of Orchard grass was usually $4 to $5 per bushel, we had reference entirely to the western part of this State, where we had farmed and purchased it. We understand the usual price in this city, has only ranged from $2 50 to $3 00.

In consequence of its having fallen some in market, Mr. White has authorised us to sell now at $2 per bushel. To stock land down effectually, it requires two bushels of well cleaned seed mixed with 12 lbs. of clover per acre. Orchard grass seed will weigh about 18 lbs. per bushel.

SHEEP FARM FOR SALE.

We call attention to the splendid Sheep Farm, in Illinois, advertised by Messrs. Murray & Co., of Buffalo, as a promising investment to any enterprising person, with some means, disposed to emigrate to the west. The only motive which induces the owner of this fine property to dispose of it is, that residing so great a distance from the premises, makes it quite impossible to give that personal attention to the flocks and farm, which is desirable.

WORMWOOD SEED OIL FOR BOTS.

The Southern planter recommends the above as the most effectual cure. It was used at the rate of one table-spoonful, in a gill and a half of spirits of Turpentine, diluted to a quart with whisky and water.

We should think that the wormwood seed oil with a slight increase or decrease of the dose, according to circumstances, would be equally efficacious diluted simply with water or milk.

STACKING GRAIN.

In reply to Mr. Robinson's letter, page 338 of this paper, requesting to know the manner of stacking grain in England, we give the engravings below, which fully illustrate the whole process.

Fig. 34.

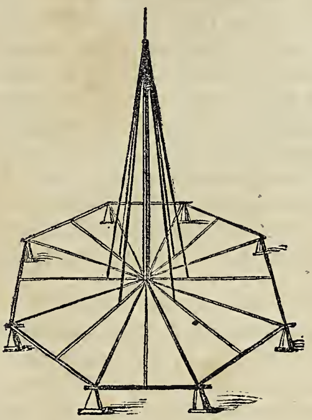


Fig. 35.

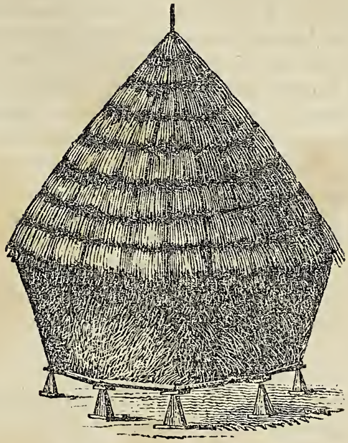


Fig. 33, is the frame of the stack, and is thus formed. Eight flat stones, about 2 feet square, are laid down where you wish to place the stack, equidistant, so that drawing a line from one to the other, will form an octagon of the required diameter of the stack. On each of these, a pyramidal stone block 2 feet at its base, 2½ feet high, or more, if thought proper, and 1 foot square at the top, is set in an upright position. On the top of each of these pyramids, a flat stone is placed about 2 feet square; and on these rest the frame of the stack, which it will be seen at a glance, a rat cannot reach; for it is so high he cannot jump from the ground on to it, nor can he climb up the stone pyramids, and if he could, he would not then be able to get over the caps.

These stands are sometimes made of brick-work, 2 feet or 18 inches square, and carried straight up, making regular pillars, as wide at the top as at the bottom; they then receive the stone cap on the top. Others are made of cast iron, hollow in the centre, and of various shapes, according to fancy; but the stone pyramid strikes us as the neatest and strongest, and we give a drawing of this simply. All these may be made in our own country, of round wooden blocks, sawed from the body of a tree, and capped with square pieces of plank, and we think answer as good and effectual a purpose as stone or iron, so long as they last.

We need not describe the bottom part of the frame, as its formation is seen at a glance. In the centre is a pole, and all around this are eight other poles, placed equidistant from each other, and about 2 feet or so from the centre pole at the bottom, and joining it at the top. These ought to be framed into the cross pieces at bottom, and made fast at the top, which any ingenious man can do.

Now commences the stacking, which is done in the usual way of laying up the sheafs of grain; only they are placed round the outside of the eight poles, which leave a hollow circle inside of the stack, 4 feet in diameter, narrowing till it is closed at the top. The stack being raised from the ground, air can get under it; and this hollow being left in the centre, it can also penetrate there; and if heat is generated, it can easily escape. We were told that grain rather green or damp could be stacked in the manner above described, without danger of heat, mould, or growth; and it may remain so for years, without injury, when the stack is put up and well thatched as in fig. 34. In England the stack is a permanent fixture, convenient to the barn for threshing; and instead of being the ugly, ill-shapen, musty mass, that too generally forms our American stacks, they present in their beautiful thatched conical groups, a pleasing appendage, and we can almost add, of neat architecture, which we have paused hundreds of times to contemplate with the utmost pleasure.

The advantages of stacking grain in this way, over that of placing it in barns, we stated under head of "Tour in England," page 135 of our August No., to which we refer the reader; where it will be seen what a great saving would be made to this country by adopting it. We had three fine stacks of oats nearly ruined the past season, in consequence of being put up a little too green, in the usual close method of stacking; that is, with no air hole in the centre, and resting on a double course of rails, bringing the bottom entirely too near the ground. We shall take care to adopt the English method in future. By stacking their grain, our farmers will not be obliged to make such a rush as they do now to market, and glut it immediately after harvest, and by reference to Mr. L. F. Allen's letter in this No., they will see the economy of feeding fresh threshed straw to cattle.

OUR TERMS.

☞Taking into consideration the hard times, and the repeated representations of agents, that they could do better for us, if allowed to remit smaller sums, with a fewer number of subscribers; we have come to the conclusion to send *Three* copies of our paper, for every *Two Dollars* forwarded us *free of postage;* and this last can always be done, if our friends will but bear in remembrance, that they are permitted to order the work *free* in all cases, by handing the money over to their respective Post Masters for this purpose.

TO OUR SUBSCRIBERS.

☞ We feel deeply grateful to our friends, for the liberal manner in which they have responded to our address of the past month. Our subscription list has increased since our last No. went to press, beyond our most sanguine expectations; indeed more than during any three preceding months, and at this rate, we can say without the shadow of boasting, that it will soon be fully equal to that of any other agricultural paper whatever, in the United States. We shall endeavor to merit their favors by superior embellishments, finer type, larger paper, and a much more varied and extensive correspondence for the succeeding volume; although in all these matters, we think we are doing pretty fairly, as this No. will fully show. All we now want is a few more active agents. Notwithstanding the hard times, thousands would subscribe if we could be brought to their notice or personally solicited; for what is a dollar for such a volume as the American Agriculturist, of 384 pages, handsomely embellished; forming a complete manual almost within itself, of planting, farming, horticulture, and stock breeding, together with much other varied and most interesting matter? Any man can spare a single dollar if he will only think so. He does it for many a thing, we will venture to say, every year, of nothing like the value and interest to him or his family, that our paper would be.

By the article above, it will be seen that we have reduced our terms somewhat, and made them extremely liberal to agents. Any paper copying these, and calling attention to them, or inserting our Prospectus and forwarding us the notice, shall be entitled to one year's subscription, or any twelve Nos. of the American Agriculturist.

ADVANTAGES OF AGRICULTURAL JOURNALS.

In the latter part of the sixteenth century, Sir Walter Raleigh had made the discovery, that the potatoe was a nutritious vegetable. He then introduced it into cultivation among his tenants; but it spread slowly, and was not brought over to this country by emigrants, till a company of Irish Presbyterians settled in Londonderry, New Hampshire; and it was forty years more, before this excellent root had become a regular dish on the farmer's table, even in New England. Now, by means of agricultural journals, how soon would the discovery of any new vegetable as valuable as the potatoe, become known throughout the land, and be brought into general cultivation? We will venture to say, if only a single bushel were this day in existence, five years hence the country would be pretty fairly stocked with it; so rapidly would a knowledge of its good qualities and the profit and advantages of cultivating it, be disseminated. And thus the agricultural papers of the present day, would be the means of accomplishing as much in five years, as was done in the olden time without their aid, in two centuries. And are they not now annually bringing about the same result, though perhaps in a less degree, than the supposed one stated above? What man, then, with the least regard for the progress of his profession; the development of the hidden wealth and resources of his country; or the increased comforts and happiness of his species, will refuse to subscribe for one or more agricultural papers?

OUR OFFICE AND READING ROOM.

It is our intention soon, to so enlarge our office, as to make it an agreeable lounge and reading room, to such as please to favor us with a visit. They will find all the American agricultural publications here, together with those of most value from Europe, besides political and other journals, containing the news of the day.

N. Y. STATE AGRICULTURAL SOCIETY.

For an account of the annual meeting of this Society, we refer the reader to page 344; the proceedings having come to hand so late, we could not give them that conspicuous place in our paper which they merited.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

Sea Manures.

Gent.—Having been much interested in the account in the October No. of your periodical, of the enlightened practice of Mr. Seely, in his management on the Wheat Sheaf Farm, of sea manures, I could not but wish his method was made known to, and practised by all our farmers on the sea coast. I recollect when I resided at Portsmouth, New Hampshire, that the usual way of applying these manures, was exceedingly annoying to many in the neighborhood, and as the method may not be known, at least to your inland readers, I will give you a short detail of its process.

From a little beyond Portsmouth, along the towns of Rye, and Hampton, the coast assumes the shape of a bended bow for 15 miles or so, making it a very favorable section for the reception and retaining of sea manures. When the easterly winds prevail, especially during spring tides in the fall of the year, immense quantities of sea-weed, mingled with more or less fish, are blown up here, which, after the reflux of the water, presents the appearance at a little distance, of large winrows of hay. The former system with our farmers, was to take this up immediately and put it into large heaps without any admixture of earth or other substances, and let it rot all winter. By spring it would be tolerably well decomposed, when it was spread broadcast upon the land, and plowed in for potatoes; and notwithstanding the soil here is of rather a poor quality, 400 bushels would be frequently obtained in consequence of this manure, though 300 might be considered a good average crop. But great objections were made to thus applying the sea-weed and fish; for they not only throw out an unpleasant odor while undergoing decomposition in heaps, disagreeably scenting the air in the neighborhood, but give so strong a taste to the crop, as to make the potatoes unpalatable for the table. In consequence of this, many of the farmers changed their plan of operation, and planted corn instead of potatoes after manuring with fish and sea-weed, or spread the compost on grass lots, and the second or third year after this, devoted the land to potatoes, which then escaped all unpleasant taste; though I have sometimes thought they were not as mealy and sweet as those raised upon land in the same neighborhood, not thus manured. But still we were annoyed by the unpleasant odors of the decomposing heap, and I cannot but think Mr. Seely's method much the best under any circumstances of applying sea manures.

John Langdon.

Buffalo, January, 1843.

We have just been favored with a package of letters from a young friend of ours, addressed to a relative in this city, from the Island of Madeira. He sailed for that place last February, and arrived in March, and as the letters contain some notices of the manner of cultivating the grape in Madeira, and other topics which we thought might interest our readers, we have made a few extracts. His lungs were dangerously affected when he left home; but we add with great pleasure, that the voyage out and residence there for a few months, proved very beneficial to him, and he has now returned to this city a comparatively hearty and well man.

For the American Agriculturist.

The Island of Madeira, and its Grape Cultivation.

Madeira is nothing more or less than an immense mountain, 35 miles long from east to west, and 20 broad from north to south, and is entirely volcanic. The island is seen at an immense distance at sea. The mountains rise abruptly from the shore, the highest peak of which, has an elevation of about 7000 feet. There is absolutely *no* level ground on the island. The height of the mountains along the south side (where I am,) cannot be less than 4000 feet. Four or five miles west of this place, is *Cape Giram,* which we passed in coming in to Funchal roadstead. The *pitch* of that cape is one immense precipice with a descent of 1800 feet perpendicular; there are no vallies between the mountains, but everywhere the hills are rent asunder and separated by deep and dark *ravines*—such ravines as my eyes never saw before. Everywhere the island gives evidence of the mighty convulsion of nature, by which it was originally elevated from the bottom of the sea. The scenery is unlike any other I ever saw; and you require to get familiar with it before you like it. There is a mixture of the beautiful and the sublime in it, that is strange and wonderful. Funchal lies on the shore of a large *cove*; there is no *harbor,* but merely a semicircular indentation in the coast. Behind it, the mountains rise like an amphitheatre to the height, as I should think, of 4000 feet, studded far up their sides with villas called "*quintas,*" while everywhere the ground is *terraced,* for without terraces the land would be too steep to cultivate; and often while we are enjoying the bright sunshine and the mild warm atmosphere in Funchal, we can look up and see the mountain tops enveloped in a robe of clouds, and the rain pouring down. But it does not reach us, we are too low down for that. The mountains composing this amphitheatre behind Funchal, are rent by three immense ravines which add to the sublimity of the scenery. One of these ravines passes through the west, one through the middle, and one through the eastern part of the town, dividing Funchal into three parts.

The precipices and the ravines are the wonderful features of Madeira scenery. There is much cultivation on the island, fer the soil is very fertile, as indeed, all volcanic soils are—everywhere you see vineyards. The vines are trained along a frame work about 3 feet from the ground, and when the leaves are out, as they are beginning to be at this time, a vineyard presents a very beautiful appearance. The island, where the vine is cultivated, being terraced, adds much to the beauty of the scenery, for each vineyard seems to be composed of several, rising one above the other. Everything here tells of the great business of the island—all the people have more or less to do with wines, no matter what may be their occupations. You see the vineyard on the mountain slope, and as you pass through the streets of Funchal, your nostrils are constantly saluted by the perfume of wine in the vaults, which, by the way, are all on a level with the streets; and a very pleasant perfume it is too. For one, I like the odor, though I cannot drink the wine. The population here are very temperate, though theirs is the wine business. I just said I liked the odor of wines in a wine vault. There certainly is a perfume which you can perceive as you pass a wine vault here, which I never noticed in America, and which I think is very pleasant. I attribute the agreeable nature of the smell, to the fact that there is nothing *but* wine in the vaults, and that the wines are not so much adulterated as with us.

This is indeed an extraordinary climate. There has been no rain since I landed here, (on the 21st March,) but it rains enough on the tops of the mountains, and as the water is conducted everywhere by small aqueducts, and all cultivation is carried on by a system of irrigation, we get all the advantages of the mountain showers without their reaching us. Everything around Funchal, shows that it is a very dry climate, and that no rain has fallen for a long time. The climate is very even, too, in its temperature; as a proof of this, I can inform you that the thermometer never varies more than twelve degrees here.

Speaking of flowers, this is a remarkable spot for them. When we anchored here on our arrival, I went on deck in the evening, to get a glimpse of the town by moonlight; and though we were more than half a mile from the shore, I had no sooner reached the deck than I perceived the perfume of the flowers, which was wafted off by the night breeze. The whole atmosphere seemed loaded with it, and it was noticed by every person on board the ship. I do not know that it is always so, but in that case I can vouch for it; and on shore, in my walks, I often perceive the perfume of the gardens.

The Flora of this island is said to be curious and interesting, and the species numerous. Of course, I am no judge, and besides I have not yet been out of Funchal. The mineralogy, on the other hand, is said to be without interest; for the rocks are all volcanic, and there are few species of minerals. As to fruits, this is not the season (April 7th) for grapes, but we have bananas and oranges. The bananas are, in my opinion, finer than the West India, but the orange is small, with a thick skin, and by no means equal to a Havanna orange, or to the St. Augustine variety. There are plenty of green peas and cauliflowers in the markets at present. Peaches flourish here in the proper season, and good apples are said to be grown. Lemons grow in plenty here, and the people raise wheat and Indian corn, but not in sufficient quantities for their own consumption. In former times the sugar cane was successfully cultivated, and once gave employment to more than one hundred sugar mills; but the grape has superceded the sugar cane, and I believe there are now but one or two mills.

For the American Agriculturist.

Cost of a Farm, and Raising Products on the Western Prairies.

No, no, gentlemen, "your old friend" is not "lost in a cane-brake," nor yet in a snow storm; although one of my neighbors has been within a week past, and actually perished, and that too, in November, in latitude 41½°. He was on a "trip to mill," and got lost on a large prairie on the night of the 16th inst., and perished in one of the most severe storms ever known at this season, since the country was settled.

Little do you know in your "thick settlements," what the pioneers of these "new settlements" have to endure. Not that there is much danger of being "taken by a bear," as the only one that ever ventured into "these diggings," fell a victim to my rifle. As to my "taking to politics," I cannot tell what may happen, as I have known many instances of insanity, "about these days." You will have received "late information from the prairies," before this, which will tell you that the fire of improvement is spreading. The staple commodity of the prairies has always been wheat; and the price heretofore has been so high, that the cultivators have entirely overlooked the necessity of providing, while they may, for a different state of things; consequently the great reduction in price has fallen heavily upon this region. It will not now command over 38 cents in the Chicago market, and although under the operation of some of the beautiful theories of our politicians, coarse wool is equally depressed, yet when you take into consideration that a vast amount of wheat has this season been hauled into Chicago from 100 to 200 miles, the difference in transportation is so great as to appear at the first glance, vastly in favor of wool.

But I would not wish to be understood as advising the prairie farmer to turn his attention to wool alone. I stated some facts in my communication in the November number of your paper, for the purpose of showing Eastern men what can be done with a little capital on the Western prairies, in sheep business, unconnected with any other branch of farming. The farmers in general turn their attention too much to one object. At one time it is wheat—again pork—and so on. And the grand difficulty is the great want of capital. On this account they are compelled to submit to forced sales. They are unable to hold over a crop. In fact, if able, they have yet to learn how wheat can be kept in stack, as at present they are unable to find storage for the grain after threshing. Will you, Mr. A. B. A., who has seen and can tell, please to enlighten them upon the subject—yes, the science of stacking grain as practiced in England.

You hear complaints of the low price of beef. Do you know how low it can be produced? I believe you are advised that no finer beef was ever eaten than that made upon prairie grass. Let me tell you the actual cost. I can buy calves at $1 50 each. I have and can hire them wintered until four years old, for $1 50, each winter. Here, then, I can have the finest fat steers four and a half years old, for $7 50 a head—cows, of course, at the same cost, including a couple of calves. The cost of sheep growing, Mr. Murray and myself have already stated. As you are whole hog men, I will give you a few items, and leave it to you to "cypher out" the actual cost of western pork. In the first place, pigs are a spontaneous production. Corn on the farm, the present year, and perhaps it is about an average, within fifty or sixty miles of Chicago, is not worth over 12½ cents a bushel. Oats 8 to 10 cents, and potatoes less. And they being so low, I will not pretend to fix a price upon beets, rutabagas, carrots, &c., but they can be raised *cheap*. The summer feed costs little or nothing, and as often as every other year, hogs will get fat upon the mast, which our oak and hickory groves produce abundantly. The next question that I expect your eastern readers to ask, is, Can prairie farmers raise grain at these prices? I will state a few facts, and they shall draw conclusions.

The first cost of land is $1 25 an acre. The first plowing we generally count as cost, though erroneously. This is worth $1 50 an acre; or to be better understood, I will state differently. Prairie land is abundant at government price; but timber is mostly in second hands and is held higher. A quarter section of

Prairie, that is, 160 acres at $1 25, is	$200
Timber, say 40 acres, which is more than enough, at $3,	120
Breaking up the prairie, at 1 50,	240
Fencing it into four lots, eight rails high and stakes, 960 rods, or 3 miles, 15,366 rails at 1 ct. 153 66; 3,840 stakes, at ½ ct. 19 20,	173
A good comfortable double log cabin, such as first settlers generally occupy,	50
Other small buildings and temporary sheds,	50
Average cost of a well with pump, $30, with buckets, $15,	15
I will add to cover contingencies, such as half an acre of land well paled in for garden, a cow yard, hog pen, and other "fixings,"	72
This makes the cost of the farm, independent of the woodland, just $5 an acre—the total,	$920

Here, then, are 160 acres of as rich soil as it is possible to imagine, all ready for the emigrant to take possession of and put in a crop, for the sum of $800. The first crop of corn will average about 15 bushels; in oats, about 20 bushels; in wheat, about 10 bushels; potatoes about 150; turnips, or rutabagas, 300; buckwheat, 25; beans, peas, millet, pumpkins, mellons, &c. &c. "a right smart chance," and some of the latter, as big "as a good sizeable boy can tote." The second crop will be some better, though the sods will yet be in the way of cultivation. After this you have a deep, loose, rich black soil, which as you do unto it, so it will do unto you. The practice generally adopted, is to take the skin and starve the body—burning straw and wasting manure—"running over" four times as much land as can be *cultivated.* In my statement of prices, I have taken this county (the Northwestern one in Indiana) for a basis. In others there may be a slight variation. Both in this State and Illinois, Missouri and Iowa Territories, there are thousands of locations to be had at about the rates stated.

If such "information from the prairies" is such as you want, you can be furnished from time to time by
"Your old friend," Solon Robinson.
Lake Co. H., Ia., November 25, 1842.

Agreeably to Mr. Robinson's request, we have given on page 335 of this paper, the best method of English stacking which fell under our observation while abroad. It is the same we have frequently seen practiced in our own country, with the exception of the stone, or cast iron blocks, for the foundation of the stack to rest upon, which are a sure guaranty against rats or mice getting at the grain. In a subsequent letter from Mr. R., we quote a paragraph below, giving an account of a great yield of tallow from a *grass-fed* cow; but if this is all the Hoosiers have to offer, we think they are bound to strike their "banners," and reverse their "corn-stalk wands" before their eastern rivals; for Mr. Ambrose T. Grey, of Pine Plains, Duchess County, has recently killed a cow *grass*-fed also, which gave 180 lbs. rough, making 160 lbs. of tried tallow. We are not advised of the weight of hide and four quarters of Mr. Grey's cow.

For the American Agriculturist.

Cheap Beef and Tallow.

As an illustration of the virtue of prairie grass for making beef, allow me to state that I killed a cow the past fall, entirely grass fed upon the prairie, the quarters of which weighed about 140 lbs. each, hide 72 lbs., and she made 110 lbs. of clean tried tallow.

The common selling price of such a cow alive, is about $8.

Solon Robinson.

Turning Hogs into Corn Fields at the West.

A good deal has been said pro and con, about turning hogs into corn fields to fatten upon the grain, and we must confess that we have hitherto considered it rather a wasteful practice; but the extract which follows from a letter of Judge Beatty, addressed us a short time since, places the system in rather a different light than we have hitherto looked upon it; and enclosing them with moveable fences, is similar to the English practice of feeding off vetches clover, and not unfrequently turnips, with sheep, fenced in with hurdles or netting. Now corn at the west is not as dear as green food is in England; we cannot see therefore, under suitable regulations, why turning hogs into the fields to consume it raw, may not be considered *good husbandry* as practiced in Kentucky; at least as long as grain is so cheap, and labor so disproportionably dear as is now the case.

For the American Agriculturist.

In relation to turning hogs into fields among growing corn to fatten, you were correct, so far, at least, as it relates to Mason, Fleming, Nicholas, and Bourbon Counties, where I know that practice prevails. Nor do I think it a *wasteful* practice, when it is applied only to feeding hogs for an *early market,* that is, for *drove* hogs. For this purpose corn should be planted early, so as to turn in hogs from the 20th to the last of August, and to have them fit for driving, from the 1st to the 15th October. During this season, we have but little rain, and if hogs are turned only into small fields, (and for this purpose a portion of a large one may be fenced off by a low temporary fence as occasion requires,) it is surprising how little corn will be left on the ground. Besides, when the fatting hogs are turned into the second field, *stock* hogs may follow to clean up what the fatting hogs have left. When the hogs are turned into corn late in August, there is much saccharine matter in the stalks, and the hogs will not only eat the corn, but will chew much of the stalk, sucking the juice therefrom; and as nothing is taken from the land, it will of course be greatly enriched. For *late* feeding, when the grain is fully matured, and when the rains are more abundant, we prefer gathering the corn, or shucking it out of the cut up shocks. A. Beatty.

Crossing Different Breeds of Animals.

We have a letter from Mr. Z. B. Wakeman, of Herkimer, this State, giving details of his experience in crossing animals of different kinds, and asking various questions of us as to ours, and concludes by saying, "that breeders generally differ in relation to this point, that the male should be of a larger breed than the female, while others contend for the contrary. The cross of the Canadian pony with English mares no doubt is a good specimen of the latter. I have crossed a few Anglo-Merino sheep for my own diversion, with South Down, and Bakewell bucks, but still I should prefer the reverse."

What little experience we have had, coincides entirely with that of Mr. Wakeman, viz: that when animals of different breeds are crossed, the best produce comes from a male of a smaller breed, on a female of a larger one; but then the disproportion must not be too great. Yet we must confess, when the reverse has been the case, we have seen some quite perfect animals as the result, and will instance particularly, that of a powerful 16 hand trotting stallion, upon a Canadian mare not over 13 hands high; a Durham bull upon Devon cows; and a large Berkshire boar upon Chinese sows. But we apprehend there is much error among breeders, in considering what *true size* is in regard to these matters.

We recollect a party of gentlemen were once present in our stable, examining a fine filly that we then owned; and in pointing out her great substance to them, and powerful developed frame, and though standing but 14 hands 3 inches high, we affirmed that there was scarcely a horse in the town a hand taller than herself, that could girth or measure with her, except in their height. They doubted this, and we immediately commenced the experiment, and to their great surprise, we did not find one horse out of eight that equalled her; and we have no doubt, from her great spread and roomy internal structure, that she was really as *large for breeding purposes*, as many a mare that stood 3 inches or perhaps a full hand taller than herself.

Youatt, in speaking of Devons, makes in substance, the same observation, for he says, "These cows however, although small, possess that roundness and projection of the two or three last ribs, which make them actually *more roomy* than a *careless examination* of them would indicate." We know this to be a fact in regard to Devons, as well as some other breeds of animals, and especially with Chinese hogs, for one standing only 2 feet high, will outgirth in any part of the body, most other breeds 6 inches taller than itself; and frequently there is more than this difference, and we presume that this was in a measure the case with the Canadian mare above mentioned, although we neglected to measure her, for the purpose of ascertaining. In crossing, therefore, more attention should be paid than is usually done, to the size of the female in those parts of the body which surround and enclose the womb.

Cline is doubtless the most experienced and scientific writer upon this subject, and he is decidedly in favor of the male being from the *smallest* breed when different breeds are crossed, which we understand in this way; the male may be *larger* than the female to which he is bred, but not so *large* as the *average* of the males of the same breed as the female. We would copy his opinion here at full length, but it has so often gone the rounds of the press, that we think all must be familiar with it.

To conclude, we know of an excellent breeder in the western part of this state, who has quite superior formed sheep, bred from a cross of the Leicester on the Merino ewe; and that he advocates the reverse method of crossing to Mr. Wakeman and ourselves. But he must recollect that his Leicester bucks are *larger only* in *flesh*, and that their *bones* are *small* and fine—perhaps even of a less size than those of the Merino ewes; were they as much larger than those of the ewes as their bodies are, we are confident it would prove as bad a cross as that detailed by Cline, where the fine Yorkshire mares were put to large cart stallions, and the Normandy mares were bred to the horses of Holstein. In all breeding, it stands to reason and nature, that there must be a *fitness* in things, otherwise the produce will prove a miserable abortion.

For the American Agriculturist.

Lotion for a Bruise or Sprain.

In a letter from Mrs. Susette Andrieu, a woman who, by instinct, experience, and talent, is, as I am persuaded, the best nurse in these United States, I find the following recipe for *sprains and bruises*. My system has always been to spread such things far and wide, for the benefit of humanity and the brute creation. In every family there should be a common-place book, in which such things should be entered or pasted, for although we often hear of cures for burns, scalds, sprains, colics, &c. &c., *when these occur*, we have either forgotten the materials or the proportions, or we have them not at hand. How many farmers are there who have such a thing as a set of phlemes to bleed a horse, or a bottle with the neck of it wrapped with twine, ready to administer a drench? But to the

Prescription for a Bruise or Sprain.

1 pint soft soap.
1 pint strong vinegar.
1 handful of table salt.
A table spoon full of saltpetre. I. S. S.

We welcome our young friend T. to our columns with pleasure. His account of Mr. Seeley's improvement is just the sort of communications we like; and shows what a great change, a practical, common-sense man can effect with a little perseverance and outlay of capital, even on the most unpromising soil. Four tons of hay at one cutting, is certainly a large crop to be obtained under any circumstances; but we cannot for a moment dispute it, knowing as we do, the respectability of our correspondent; and besides, we have recently received information from other parts of New England, showing incontestibly a similar amount of hay, cut per acre, all which facts, and the manner in which it was done, in due time we shall lay before the public.

We always like to give the names of our correspondents in full to their communications, but T. objects, because he feels "rather *green*" in writing. Very well, when he gets a little more *dried*, or in other words, *seasoned* to the thing, we hope he will not feel quite so diffident. In a private note, he promises an article or two on the Island of Cuba, and the Bahamas; where he thinks he will be more at home among orange groves, coffee trees, and pine apple grounds, than with Connecticut corn-stalks, and Weston pond holes. We think him sufficiently at home *anywhere*, and are of opinion his Cuba article will strongly interest our southern friends.

For the American Agriculturist.

Reclaiming Swamps and Stony Land.

Weston, Fairfield Co., Con., Jan. 16, 1843.

Messrs. A. B. & R. L. Allen:—

In 1836, Mallett Seeley, Esq., of this town, purchased a tract of land here, containing 11 acres, at $28 per acre, a price which, even in those times of speculation, was considered high. It was emphatically a hard bargain, the surface of the ground being covered with large stones; a small part of the tract also, was a ledge, and another part a swamp, with bushes on it, and this quite stony.

In 1837, Mr. Seeley commenced improving two acres situated near the centre of the piece. About one-third of these two acres was occupied by a pond of stagnant water, from four to six feet deep in the centre; the more shallow parts were covered with swamp alders, pond willows, and other shrubs. The pond had never been known to be entirely dry. The remainder of the two acres was pretty much covered with stones, many of them loose on the surface, and many firmly imbedded in the ground. At that time not one-quarter of the two acres was considered capable of being plowed, and a man would have been in great danger of barking his shins who attempted even *that*.

Mr. Seeley began his operations on the pond-hole, where first of all he dug a ditch of about 30 rods in length, which let off the water, and then cut all the bushes which grew there. Leaving the pond, he then drew off the loose stones which covered the remainder of the two acres, and deposited them on the line where the fence enclosing the lot was to be made. He then got an instrument called here, a "stone eradicator," and also the two strongest yokes of cattle he could find. He worked this tool, (which requires three men to manage it,) about two days, in getting the fast stones out of the ground ready to draw off; and then drew them to the same place as the rest. Some of the stones were so large, that it was necessary to blast them after they were out of their beds, before they could be dragged off. This was done in the summer of 1837.

The following October being very dry, he resumed his labors on the pond-hole, from which the water had been entirely discharged by the ditch. He now dug the ditch still deeper, and laid an underdrain about 15 rods long—the remaining 15 rods were left open. With a yoke of cattle, he then drew out the roots of the bushes from the pond-hole, and ploughed the bottom of it in all directions, and with a scraper, scraped out the muck, so that the bottom was three feet lower in the centre than the bottom of the underdrain, which formed the outlet. In the spring of 1838 he ploughed the hard land, manured it with about thirty cart loads of barn-yard manure, and planted it with corn which gave promise of a good crop, but was mostly cut off by an early frost. The season being wet, he did not work at the pond-hole, but planted the margin with potatoes without manure, and got an excellent crop. During this summer he inclosed the two acres with a heavy stone wall.

In the spring of 1839, he sowed that part of the lot where he had corn the preceding year, (about one and a half acres) with oats, and seeded with a half bushel of timothy seed, and a peck of clover seed, and again planted the margin of the pond-hole with potatoes, manured in the hills, and had capital crops. As soon as the potatoes were dug, in order to rid himself of the stones yet remaining on the lot, he drew them into the pond-hole, so as to raise the bottom above the underdrain forming the outlet; and having thrown over them a sufficient quantity of shavings and brush, to prevent the dirt from falling down between the stones, he scraped back the muck over the brush to the depth of two feet. He had now finished the pond, which you will observe was in a manner underdrained throughout, and got rid of the stones on the remainder of the lot.

As soon as these operations on the pond-hole were completed, and late in the same autumn, Mr. Seeley carried about ten cart loads of barn-yard manure on to the now reclaimed pond-hole, plowed and cross-plowed, and sowed it with rye, and seeded it with one peck of timothy seed. In 1840 he mowed two large crops of clover from the upland part of the lot, and had a great crop of rye on the former pond-hole; and in the fall of the same year he mowed a very heavy crop of timothy, where but a few weeks before he had a crop of rye. In the same fall he sowed a quarter of a ton of plaster, which cost $6 per ton in the lot, on the two acres. About the 20th of June, 1841, he mowed a very heavy crop of timothy from the whole lot, but did not take particular notice of the amount of product. Immediately after mowing, he sowed another quarter of a ton of plaster on the lot, and during the same season mowed another large crop of grass. In the autumn of the same year he gave the meadow a top dressing of 15 cart loads of barn-yard manure. In the summer of 1842, the crop was so large that he took particular pains to ascertain the amount—it was *four tons per acre*, and the meadow was mowed but once that season, and this was as early as the last of June. As soon as the grass had started again, two cows and a horse were turned into it; it furnished them with good pasture during the greater part of the remainder of the season, and they were pasturing there when the snow came in December. At that time, the upland part afforded good feed, and the pond-hole part would have mowed a good swath.

Mr. Seeley calculates that the crops he obtained from the lot while under tillage, together with the first crop of grass, paid him for all he had laid out on the land, leaving him the lot in its improved condition, at its original cost. He estimates its value, even in these times of reduced prices, at $100 per acre.

These improvements on this small lot have been effected at an expense of $125—or $62 50 per acre. Your own skill and experience will enable you to say, whether the money has been wisely expended. It may be that others have obtained an equal product from the same extent of land, but it may well be doubted whether the same results have been in *many* instances, produced on a spot so unpromising. The remaining nine acres of Mr. Seeley's original purchase are undergoing the same process of amelioration, and bid fair to afford a satisfactory result.

In conclusion, I would assure you, that you may rely on the truth of the foregoing statement—for nothing has been asserted which cannot be proved.

With much respect,
Your ob't serv't, T.

We make no apology to our readers, for giving the following familiar letter in extenso, just as it was addressed us. It is generally known that the writer of it is an elder brother, whose communications have appeared previously from time to time, in this paper over his initials. He now consents, in accordance with our request, that his name shall be affixed in full.

As some are at a loss about our respective names, we deem it proper to add, that it was Mr. L. F. Allen, who wrote with so much effect and popularity several years ago, for the Genesee Farmer, under the signature of *Ulmus*, and not either of ourselves; and we trust his communications will not be received with the less favor by an indulgent public, now that he abandons the unbrageous shade of the *Elm*, and appears under that of his own *proper person*. He is a man of large experience in farming and stock breeding where he is situated, and the public may rely upon his statements as those of a thorough-going practical man. After this explanation we shall deem it unnecessary to make further introductions to his communications.

For the American Agriculturist.

Dorking Fowls.—I have had frequent inquiries from persons at a distance, for pairs of the Dorking Fowls you brought me last year from England. As I ordered them solely for my own use, and not for sale, I take pleasure in giving them away as they can be spared, to any of my friends who feel the least desirous of obtaining them. In those raised this year, I have been unfortunate in the sexes; having at least three males to one female. I have now ten pullets, and several cocks, and very beautiful they are too. The hens are Pheasant-shaped; with a clean and beautiful head and throat; and a deep, heavy brisket, like a Durham heifer. The cocks are magnificent—variegated in color, with a brilliancy of plumage I never saw surpassed, and rarely equalled. I had the curiosity the other evening to weigh a pair of them. The cock, now 17 months old, weighed 8 lbs., and the hen, of the same age, 5 lbs., both in common flesh only. I have no doubt if fatted, the one would have weighed 10, and the other at least 6 pounds.

A friend who is a great fancier of fine animals, and who possesses in his various breeds of horses, cattle, sheep, swine, dogs, &c. &c., as fine specimens as the country can produce, in a note to a letter recently received, observes: "The Dorking Cock you sent me is a superb fowl—I shall hereafter make this my chief stock of hens. Cannot you send me a pullet in the spring?"

Although now in the depth of winter, with over a foot of snow on the ground, the hens lay daily, running out, in the severest cold.

Wintering Stock.—You ask to know how my stock progresses thus far through the winter? You shall have the whole story. You saw, last fall, my barn and what was in it, and noted the stacks in the field. Our stock now consists of some 110 head of neat cattle, and about 20 horses. Of these last, four are work horses for the farm, and the residue mares and colts; nearly all fine high blooded trotting animals. We cut last season some 110, or 115 tons of hay, mostly of good quality; and about 140 acres of wheat, oats, and barley. On the 18th November the winter set in suddenly, with a furious gale and snow storm, extraordinarily early, even for this northern climate, which drove the cattle directly into winter quarters. Although illy prepared to receive them thus early, a shift was made, and they were at once attended to. The cows, 32 in number, with two yoke of working oxen, are all stabled nightly and fed with hay, and after being let out and watered about 9 or 10 o'clock in the morning, pick straw through the day in the yard. The young stock, composed of steers, heifers, and calves, have been fed with the coarser hay from the stacks till a few days since, when our thrashing having regularly commenced, they were driven to the barn, and are there fed on straw all they will eat. The calves, of which there are upwards of 30, I have divided into two classes—the elder, and the younger, but all of this year's produce, and keep them in two adjoining yards and houses, with ample mangers for hay. They go in and out at pleasure; are watered once a day, (this is all they will drink,) and fed with hay night and morning, and pick considerable straw through the day. A very few oats are given them, and they are growing as rapidly as when on grass. All have salt once a week, and are in thriving condition and good health.

The mares and colts range in the yard with an open shed to go under at pleasure, and feed mostly on straw, coarse hay, orts, and chaff; then, by turns, they do the thrashing, and when so employed, are stabled and better fed than when running out. They are salted and watered like the cattle, and are doing equally well. There is one peculiarity, and a very beneficial one I find, which all farmers do not understand in wintering horses and neat stock, on the same farm. Our work horses are stabled in a separate barn by themselves. The cows daily go to their dung heap, and pick out and devour most greedily every straw of bedding, or litter that is thrown out from the stables; and in return the colts go to the cattle heaps and work away there daily, gorging themselves with the litter almost to bursting. A lot of young shoats glean after all, and in this manner hardly a grain of anything is lost.

A word or two here of Thrashing.—I have no thrashing machine. Wheat farmers who grow large quantities of grain, and want it early in market, may find them necessary; but such as have stock to winter, I fancy will see little profit in them. It is certainly as expensive as either horse or flail thrashing, with more waste of grain. *Cattle like horse thrashed straw better than any other;* and where it can be done daily through the winter, and fed out from the floor, a snug tidy job is made of it. Two men, with four or six horses or colts, will thrash and clean up 75 to 100 bushels of oats or barley per day, and throw the straw to the cattle.

You may ask what labor is required for the attendance of this stock? One thoroughly smart man can tend the whole of them; but as some 20 of the cows are thorough bred short-horns, and Devons, a bull or two, &c., of which I take a little extra care; one man has charge of the *fine* or blood stock, together with all the early calves, and 6 suckling besides—60 in all, and cleans the stables, cuts up a few roots for three or four of the nursing cows, young calves, &c., and attends to their suckling twice a day. This man is no *swifter*, is going on 60 years old, but is methodical as a clock, and neglects nothing. The other stock, excepting the work horses, is attended to by one man, who does the milking, cleaning of stables, and other little notions, which takes altogether about half his time. In what experience I have had in growing stock, I find there is no economy in neglecting one's animals. It is "saving at the spiggot and losing at the bung." During the past year I have lost but one animal, and that by an accident.

Farm Houses.—I have seen and read the designs of a great many farm-houses in the agricultural papers. Many of these are *queer* things; fit for any body but a farmer. Mr. Downing, of Newburg, has, I observe, published a book of designs which I think well of, and hope it will improve the taste of our people generally in this particular; for I honestly confess to you that I think our rural architecture in America is as uncouth as need be; oftentimes scandalously expensive, and withal comfortless, and inconvenient. I have been putting up a snug little affair of this kind which is hardly yet finished. It has cost but little, yet to my eye it is convenient, snug, and sufficient for all needful farm purposes. I will send you a drawing of it before long, which if you approve, you may publish.

Mutton Sheep.—I often regret that I cannot keep sheep. You know how I have tried to keep these useful animals, and how my efforts have been thwarted. Were I again to attempt it, I should be disposed to follow the plan of my intelligent friend, William Garbutt, of Monroe county. He has a select flock of well bred Merino ewes, crossed by a thorough bred Bakewell buck. The lambs are large with astonishing fleeces; woolled as profusely as the Merino, and nearly as long as the Bakewell; of a good quality—with a round, compact carcase, susceptible of extraordinary fatness.

Mr. Garbutt breeds only by a direct cross from one thorough bred to the other; and occasionally by a second cross of the thorough bred buck on the grade ewes thus produced, in order to deepen the blood on either one side or the other. He remarked to me when I saw his flock, that the grade animals, in the produce of the two extremes, when bred together deteriorated rapidly, losing their caste and uniformity; but bred directly to pure stock on either side, the produce is fine and beautiful. His usual course is to select superior Merino ewes and use a Bakewell ram.

I admire the noble, systematic form of the Bakewell, and the smooth, compact, muscular Southdown; but their high prices and scarcity, have hitherto prevented the general farmer from obtaining them in number sufficient to make up his flock. The Southdown crossed on the Merino produces a beautiful animal. I once tried them, and the produce, both in carcase and wool was admirable.

The White Carrot is a most excellent root for stock; horses, cattle, and hogs are very fond of them. It was near the middle of June last year, before I obtained my seed and got it planted. It came up about the first of July. It was sown on a light piece of sandy loam, naturally strong, cleared up about 7 years ago, and was never manured. They grow partially out of the ground like the Mangel Wurtzel, and have a beautiful clean taper root. They pull as easy and clean as a radish. I measured a small piece of about 4 square rods, and the yield was at the rate of upwards of 1000 bushels to the acre. Could they have grown another month, it would have added greatly to their size and product. I intend trying them extensively next year. These and sugar beet are the best roots I have ever grown. The latter have always yielded abundantly with me; 8 to 1200 bushels is a fair crop. I never have succeeded *uniformly* with Ruta Bagas.

The White Field Bean is a valuable and profitable crop, and yet with all its value, little attended to by our farmers. I planted this year about one-third of an acre of the large kidney variety—hoed them only once, and harvested upwards of 10 bushels—they grew beside my white carrots above mentioned. I planted in hills, about 2½ by 2 feet apart. Had they been better cultivated, I presume the crop would have been much greater. There is no more profitable vegetable for food. Observing housekeepers have remarked that one bushel of beans for family consumption, is worth 4 bushels of wheat, and I believe it. No better, more savory, or substantial diet can be produced, than the luscious pork crowned " pot of baked beans."

A good Kitchen Garden is scarcely ever half valued by our farmers. No spot of ground of five times its extent yields half so much of real housekeeping comforts as the garden; and although farmers generally dislike to " putter" about a garden, yet no part of the farm is more profitable, and nothing helps so much towards good and wholesome living, as its products. I have tried it thoroughly for years, and have found my account in it. Besides, it is a delightful object to look at, and gives any spot a more *homelike* appearance, than all other objects combined. Every farmer should raise his own garden seed. They are better than those he can buy.

L. F. Allen.

Black Rock, Jan. 1843.

Happening up at the Bulls' Head the other day, with a view of looking over the cattle there, our eye was instantly attracted to a fine lot of grade Short Horns; and inquiring for their owner, we soon found him among those present, in our excellent friend, General Shelby, of Kentucky; and as there has been much dispute about the ability of Durhams *driving* as well as the native stock, we solicited the facts relative to the journey of the present drove. It seems, owing to their heavier weight, that over the *frozen* ground, they did not travel as well as the common animals; but on a *good* road they did. So far then, as this experiment is concerned, we may infer that to start them early in the season, there can be no material difference in the time of traveling, of Durham over native cattle. " Well then," the reader will say, " give us the natives." But softly, if you please, and don't jump at conclusions quite so rapidly; for in the first place, a 4 year old steer, three-fourths bred, was the *leader* of the lot the whole of the way; and he would weigh at least 1,200 lbs. and in form was almost as good in the brisket and other points, as fig. 31 is represented on page 330 of this paper. *He* would make *English Mess Beef*, and if sold alone, would have brought at least *one cent* per lb. more than any native animal present, although the market was full on that day, and several hundred fat beasts for sale. As it was, General Shelby had the satisfaction of taking one-half cent more per lb. for his entire lot, than the best herd of native animals present could command. And the same was the case when we were in the New Orleans market last spring; the grade Durhams from Kentucky, being floated down the Mississippi, and arriving in better condition than they can here, after their long tedious drive over the mountains, sold for at least one cent more per pound there than the native cattle. Here then, is the striking difference exemplified in dollars and cents, of the utility of improving our cattle. We need only add, that General Shelby, in connection with the Hon. Henry Clay, imported a superior lot of Short Horns from England, about five years ago, which we had the pleasure of examining at Buffalo, on their rout to Kentucky.

For the American Agriculturist.

DRIVING CATTLE FROM KENTUCKY.

New York, 18th Jan., 1843.

Messrs. A. B. & R. L. Allen:

The 22 head of cattle, which you examined at the *Bull's Head* on Monday last, were the residue of a lot of 54 head, which I sent off to this market on the 2d of October, with the desire of getting them in about Christmas. One-half were common stock five years old, and estimated to average nine hundred. The others, such as you saw, being about three-fourths bred Durhams, of the importation of '17, upon the Patton stock, were 5 and 6 years old, and estimated to weigh fifteen hundred, at home. One-half the distance was made in the usual time, the large cattle evincing as good traveling qualities as the others; and this, I doubt not, would have proved to have been the case throughout, if the roads had not become rough and frozen; while this was the case, the large stock had to lay by, and it was barely practicable for the others to keep in motion; there was consequently a difference of fourteen days in the times of arrival. The separation of the drove, which at first was only about half as large as we usually have them, and the long period of 90 to 105 days they were on the road, occasioned an expenditure of fifty per cent. more than our stock ordinarily costs in driving in the spring season.

So far as I have been able to judge of the weights of the cattle here, I think the common stock lost about 12 per cent, and the large ones about 15 per cent. of their weight. It is presumable that there would have been little or no difference in this respect, provided the state of the roads had permitted the stock to keep together, and perform the trip in the ordinary time of 65 or 70 days.

The foregoing facts, with the inferences deducible therefrom, touching the relative merits of the improved and unimproved breeds of cattle, are at your service.

I am respectfully,
Your ob't serv't,
James Shelby.

As several of our correspondents have written to us inquiring the price of seed wheat, we refer them to General Harmon's letter below, for answer; and for further particulars of its cultivation, they will find them page 261 of our Dec. No.

For the American Agriculturist.

Varieties of Seed Wheat and their Prices.

Messrs. A. B. & R. L. Allen:

The White May Virginia wheat that I have under cultivation, I received from Mr. Cocke, of Virginia, late in the fall of 1837. The first two years it yielded so well, that in 1840 I sowed fifteen acres. The following spring was very unfavorable for winter wheat, owing to frequent freezings and thaws. My White May was more injured than the improved White Flint, and not as much as several other varieties. The two last seasons I have sown but one bushel each season of the White May, that quantity being sufficient to experiment upon. It is in its growth not as large straw as some varieties, and very much resembles the improved White Flint. Chaff white and bald; berry red, very flinty, and heavy, weighing from sixty-three to sixty-six pounds per bushel. It is one week earlier than the common varieties, and has not suffered any by rust, while other varieties sown on the same land, and at the same time, have suffered severely some seasons.

I have tried it on oak opening land, of a sandy and gravelly loam, and clay soils, and on the beach and maple lands, soil as above, and on river bottoms. On the last, the straw was bright and berry plump, while the Flint was badly rusted and shrunk. The White Flint has been the soundest and most hardy variety that we have here, but it was there outdone by the White May. On the oak lands the White Flint has proved the most favorable of any of the varieties that I have tested. The two last seasons I have had frequent applications for the White May, but have not sold a single bushel for seed. I have sent several lots to the west and south, from one to two quarts in a place, at the request of those who were anxious to experiment on new varieties.

The varieties that I have under cultivation as experiments, are sown in strips through the field, about one bushel each, all on the same soil and at the same time; and I select my seed for the next sowing from a strip through the middle of each variety, so as to keep it as pure as possible. The improved White Flint is my main crop. I have sold several hundred bushels a year for several years past for seed, which has gone to other States and Canada, and as yet I have not heard any complaint as to purity or quality.

My price at the barn has been 25 cents per bushel over the miller's price. From here to New-York it has cost from 31 to 38 cents per bushel in barrels. Barrels cost from 31 to 38 cents each, holding three and a-half bushels. I expect to be able to supply orders for my improved White Flint at former prices; and from my experimental field I would furnish small lots at fair prices. I will forward you a barrel of samples immediately after harvest. I do not suffer my experiment crop to be put in the barn with my main crop, but thresh my seed in my hay barn, on a canvass, with the flail; this precaution is necessary to keep them pure.

I have under cultivation the Bellevue Talevera, English White, White Province (French), White May Virginia, White Silver Beard, from Kentucky, better known in this State as Hutchinson Wheat, or Bearded Flint, or Canada Flint, and Wheatland Red. This is nearly as early as the Virginia May, from which it was obtained by sowing in the Spring, Common Flint, Improved Flint, and several other varieties in small plots. Several of the varieties that I have tested have been reputed as not being hardy, or producing a berry of inferior quality. I dislike all bearded varieties. Last fall I received a sample of the Mediterranean Wheat, from Mr. Ellsworth, of the Patent Office, which I have sown. It is said to be very hardy, and seldom injured by the fly or rust. Its long stiff beards, and dark and thick bran, producing flour of inferior quality, are strong objections to it on our fine wheat soils.

Any communications on wheat or its culture, received through the American Agriculturist, or otherwise, post paid, will be duly noticed.

Yours respectfully, R. Harmon, Jr.
Wheatland, *Monroe Co., N. Y. Jan.* 20, 1843.

ANNUAL MEETING OF THE N. Y. STATE AGRICULTURAL SOCIETY.

Being unable to attend, we had made arrangements for a report of the annual meeting of this society, but for some reason or other, unexplained to us, we have not yet received it. We are therefore greatly obliged to Messrs. E. P. Prentice and C. N. Bement, of Albany, for their several letters detailing the general proceedings, but as the editors of the Cultivator have been so obliging as to forward us a proof sheet of the whole, in anticipation of the issue of their paper, we shall copy from that all for which we have space. We beg leave to return our thanks to Messrs. Gaylord & Tucker for this favor, and shall be happy to reciprocate it any time in our power.

The annual meeting of the New York State Agricultural Society was held in this city, on the 18th of January. The Society convened at 9 o'clock, A. M., in the Lecture Room of the Young Men's Association, the President in the chair. Gentlemen were in attendance from the counties of Albany, Cayuga, Columbia, Greene, Jefferson, Livingston, Lewis, Monroe, Montgomery, Madison, Otsego, Oneida, Orange, Oswego, Queens, Rensselaer, Schenectady, Steuben, Saratoga, Tompkins, and Wayne.

The Report of the award of premiums on Field Crops, &c. was read by the Secretary, Mr. TUCKER, as follows:—

At the regular meeting of the Executive Committee, on the second Wednesday of January, 1843, the several statements of the competitors for the premiums on Field Crops, Essays, Paintings, Engravings, and Designs for Farm Buildings, were referred to appropriate committees, upon whose report the following premiums are awarded:

ON FIELD CROPS.*

ON INDIAN CORN.—First Premium to *Samuel Phelps*, of Ira, Cayuga county. 122 bushels per acre—$15.

Second, to *Wm. Ingells*, of Volney, Oswego county. 89 bushels per acre—$10.

Third, to *Joseph F. Osborn*, of Port Byron—$5.

Fourth, to *Anthony Van Bergen*, of Coxsackie, Greene county. 85 bushels 51 lbs, per acre—Diploma.

ON BARLEY.—First Premium to *Nathaniel S. Wright*, of Vernon, Oneida county. 53 bushels per acre—$10.

Second, to *T. I. Vandeveer*, of Amsterdam, Montgomery county. 40¼ bushels per acre—$5.

ON RYE.—First premium to *Israel F. Goodwin*, of Westmoreland, Oneida county. 32 bushels and 36 lbs. per acre—$10.

Second, to *T. I. Vandeveer*, of Amsterdam. 28 bushels, 29 quarts per acre—$5.

ON OATS.—First Premium to *Samuel Phelps*, of Ira, Cayuga county. 102 bushels per acre—$10.

Second, to *Wm. A. Russell*, of Salem, Washington county. 97 bushels per acre—$5.

Diploma, to *Israel F. Goodwin*, of Westmoreland. 81 bushels per acre.

The Committee also recommend a special Premium of $10, to *Geo. Sheffer*, of Wheatland, Monroe county, for his crop of oats of 871¼ bushels, from 9½ acres of land, being an average of 91¾ bushels per acre.

ON PEAS.—First Premium to *George White*, of Rutland, Jefferson county. 33¾ bushels per acre—$10.

ON POTATOES.—First Premium to *George White*, of Rutland, Jefferson county. 1 acre 1 8-10 rods—421¾ bushels Pinkeyes—$10.

Second, to *George Sheffer*, of Wheatland. 400 bushels per acre—$5.

RUTA BAGAS.—First Premium, to *John McConnel*, of Canandaigua. 855½ bushels per acre—$10.

ON BEETS.—The First Premium for beets, to *George Sheffer*, of Wheatland. 1 acre 12 rods—1026⅔ bushels —$10.

ON CARROTS.—First Premium to *Wm. Risley* of Fredonia, Chautauque county. 985½ bushels per acre —$10.

ON ESSAYS, &c.

There were no competitors for the Premiums offered for Essays on Agricultural Chemistry, on Rotation of Crops, and on the introduction of New Agricultural Products.

For the Premium for the best Essay on the General Management of the Farm, four Essays were presented. The premium was awarded to *Willis Gaylord*, of Otisco, Onondaga county—$20.

But two Essays were offered for the Premium on the Management and Application of Manures. The Premium was awarded to *Willis Gaylord*, of Otisco—$20.

DESIGNS.—For the Premium on the best plan of a Farm House, Barn, and necessary out-buildings, three plans were presented. The Gold Medal was awarded to *John J. Thomas*, of Macedon, Wayne county; and a Silver Medal to *D. G. Mitchell*, Salem, Conn., for the second best.

PAINTINGS.—The Committee to whom were referred the several Paintings offered for the Gold Medal of the Society, for the best specimen of Paintings of Domestic Animals, recommended that medals of equal value be given to *Woodside*, of Philadelphia, and *Van Zandt*, of Albany.

The Silver Medal for the best specimen of Floral Painting, was awarded to *E. Whitfield*, Albany.

ENGRAVINGS.—The Gold Medal for the best engraved portrait on wood, of Domestic Animals, was awarded to *J. W. Orr*, of this city.

Here an interesting letter was then read by the President, from the Corresponding Secretary, Henry S. Randall, Esq., who, it seems, is not yet able to forward his annual report, in consequence of not having received many of the communications designed for it. He states that he has addressed about three hundred official letters to eminent agriculturists in different parts of the globe, which have already been extensively responded to, and in any event, we shall look for an interesting and voluminous report from him when it comes.

The Report of the Treasurer, E. P. PRENTICE, Esq. was then read. The receipts and disbursements of the Society for the last year, were as follows:

Balance on hand, Jan. 19, 1812,	$ 969.36
Receipts during the year,	2,349.92
	$3,319.28
Payments for Premiums and expenses,	1,475.36
	$1,843.92

The Treasurer estimates the sum now due by the Society for Premiums, &c., at about $450, leaving a balance of about $1,400 in the treasury, after the payment of all demands against it.

Several resolutions were now adopted, the most important of which were:

That a number of copies of Dana's "Muck Manual," and Ruffin's "Essay on Calcareous Manures," be distributed as State Society Premiums.

That a conference be had with the State Geologists, on the subject of establishing an Agricultural Museum.

That a meeting of breeders be held for the purpose of discussing the different points of merit in domestic animals, with a view of arriving at some definite opinion as to the points most desirable to be obtained in breeding.

That the New York State Agricultural Society regard with great interest the proposition of HENRY COLMAN, Esq., to make an Agricultural Tour through some of the most highly cultivated portions of Europe, and anticipate from this distinguished writer and friend of Agriculture, a body of valuable information, which will impart a fresh impulse to agricultural improvement throughout our country: and the Society therefore directed the Treasurer to subscribe for 100 copies.

---

* Several applications for the Premiums on Field Crops, have been received by the Rec. Secretary, since the annual meeting of the Society.

That it be recommended to the Executive Committee to hold the next annual Fair of the Society in the city of Rochester.

That the State Society respectfully petition the Legislature for as many copies as they may see fit to grant, of the Natural History of the State, now in course of publication, to be distributed in Premiums by the Executive Committee.

The Cultivator adds, that several other resolutions of much interest in relation to the objects of the Society were discussed and finally referred to the Executive Committee for further action.

Only two communications are reported, that of Mr. E. K. James, of Poughkeepsie, on the cultivation of wheat, and Mr. C. N. Bement, of Albany, on dairy salt, manufactured at South Hadley, Mass., by Messrs. Bardwell, Damon, & Co., for $1 12 cts. per bushel. Mr. B. and others assert from their own experience, that it is superior to any other kind whatever for the dairy.

On the report of the committee appointed for that purpose, the following gentlemen were unanimously elected officers of the Society for the ensuing year:

James S. Wadsworth, Livingston, *President.*

Vice Presidents.

1st dist., James Lenox, New York.
2d " Robert Denniston, Orange.
3d " Anthony Van Bergen, Greene.
4th " E. C. Delavan, Saratoga.
5th " Jonathan D. Ledyard, Madison.
6th " Z. A. Leland, Steuben.
7th " J. M. Sherwood, Cayuga.
8th " L. B. Langworthy, Monroe.
H. S. Randall, Cortland Village, *Cor. Secretary.*
Luther Tucker, Albany, *Rec. Secretary.*
Ezra P. Prentice, Albany, *Treasurer.*

Additional Members of the Executive Committee.—C. N. Bement, Albany; H. D. Grove, Buskirk's Bridge; Alex. Walsh, Lansingburgh; J. M. D. McIntyre, Albany; Thomas S. Hillhouse, Watervliet.

The address of the President, James S. Wadsworth, Esq., is spoken of very highly, and we are happy to see that a copy for the press has been solicited.

Upon the whole, things look very promising with the Society, and we shall expect to see it growing in favor with the people, and adding annually to the interest and usefulness of its proceedings.

FOREIGN AGRICULTURAL NEWS.

From the London Far. Mag., for Nov., we condense some valuable information.

Sheep Management.—From the discussion at the Leominster Farmers' club, it was agreed:

That 152 days is the average time of gestation for ewes.

That a Leicester, or any long-wooled ram, if sent to the pasture with ewes, will serve 70, if kept in, and the ewes taken to him, 140.

That one South Down ram, if sent to the ewes, will serve 100, if kept up, 150.

That about a fortnight or three weeks previous to the season, the ewes should be changed to a better pasture; and that during the time of pregnancy, they should be well, but not highly kept—a dry pasture being preferable.

That assistance to ewes at the time of yeaning, should be cautiously given.

That if it be necessary to administer anything to weak lambs, a tea-spoonful of peppermint is much to be preferred to ardent spirits.

That the feed during the lambing season, should be on a dry pasture with a southern aspect.

That on the third day after weaning, the ewes should be once thoroughly milked.

That after weaning the wethers be separated from the ewe lambs, and both be divided into small lots; as they thrive much better than when large numbers are kept together.

That an occasional change is preferable to a permanent pasture.

That as at this season of the year, when the frosty mornings set in, several of the lambs of a flock are lost, apparently from the same disease, the seat of which has generally been considered to be an obstruction of the water passage, the following recipe has been found highly beneficial, and has been known altogether to avert the catastrophe, if regularly and skillfully applied:—

A teaspoonful of turpentine; *after* which three tablespoonsful of savine tea, and the same quantity of rue tea, mixed together. As the turpentine will not mix with the latter ingredient, it must be given *alone.* This dose should be given at the interval of a week. The same quantity of turpentine may also be administered in a little common salt and water, either from a horn or bottle; if properly done, it is calculated that 100 lambs may be drenched in an hour. It was also recommended that the lambs should be folded the night before, that the dose may be given when fasting.

That for washing sheep, tanks constructed for the purpose by the side of brooks or rivers should be used; this situation being preferred as admiting a free current of water, and affording protection to the washers, as well as insuring the better and more effectual performance of the work.

That the process of shearing should never be carried on without a proper application for shear-cuts being at hand; as by a little precaution on the subject, many an irritating and troublesome sore is prevented, and the shepherd saved considerable trouble; also that the following recipe has been proved eminently successful, viz:—Friar's Balsam, Tincture of Myrrh, and Goulard Extract.

That fly-powdering should be resorted to as soon as the sheep are shorn, and repeated monthly, or as the weather may render it necessary.

We commend all the above suggestions except the large number of ewes to be bred to the bucks, which, if it be not presumptuous, to place our opinion in oppesition to such thorough practical breeders, we should say was too large. One great cause of poor stock is, the excessive service demanded of males, and we would err on the safe side in this particular.

Portraits.—The embellishments of the London Far. Mag. are chiefly engraved on steel, are of a highly finished style, and have been somewhat varied lately by the introduction of the portraits of eminent agriculturists; and we must confess, as fond as we are of animals, that we are glad to see the change. The August number has a portrait of that eminent breeder, Robert Bakewell, whose biography is copied into our November number. He is represented as a large, stout, full-faced, John-Bull-looking man; with a very fine eye, and handsome expressive mouth; and a physiognomy upon the whole, indicative of genius. One cannot judge of his head, from the massive wig and broad brimmed hat which cover it.

In the November number we have a portrait of the celebrated Earl Spencer. It shows an intellectual face, but we do not like it so well as his own living physiognomy, that we had the pleasure of seeing last year in Yorkshire.

The London New Farmers' Journal. We wish to call attention to this able and well conducted paper. It is weekly, and in addition to more or less agricultural matter, gives a summary of the politics and news of the day, and in fact, is a most excellent family newspaper, such an one we should suppose, as English emigrants would desire much to read in this country. It has latterly added greatly to its interest and value, by giving engravings on wood of celebrated animals, and agricultural implements. These are executed in a style superior to anything we have in this country. The three animals before us, are the Duke of Northumberland, Duchess 34th, and Cleveland Lad, from Mr. Bates' celebrated stock, all of which have received the first prizes, both at the Yorkshire and Royal Agricultural Society of England. We have seen these animals, and can attest to the general truth of the portraits. The Duke, we think, has hardly justice done him, but the Duchess stands forth in all her noble proportions, the most splendid cow we ever looked at.

Mr. Bates has furnished a short memoir of his family of Short Horns, to accompany the two first portraits, but as a more particular account of their history appeared in our Sept. No. we shall not further advert to it, now than to add, it is concluded quite characteristically. "Hundreds of men" he says, "may be found to make a Prime Minister, for one fit to judge of the real merits of animals." We are half inclined to echo the opinion.

We have noticed the paragraph addressed to us by the editors of the New Farmers' Journal, in their paper of 14th November, and shall take care to see the American Agriculturist forwarded hereafter, minus the heavy post duty.

Dr. Playfair was to deliver a series of lectures in December, on the "Application of the principles of Physiology to the fattening of cattle."

India Silk Worms and Mulberry Trees.—At the meeting of the Royal Asiatic Society, a report was made, stating that the silk business in Affghanistan pays a profit of 100 per cent, and recommends the introduction of it into Candahar and other parts of India. It states that the eggs of the silk worm in Bengal, are hatched three times in the year, while those in the south of Europe have but one crop annually. We have just conversed with a French gentleman, who has been practically acquainted from childhood, with this business in Lyons and its vicinity, and he doubts the possibility of three, or even two profitable crops per annum, of worms. He has promised us his views on this subject hereafter.

NINETEEN DAYS LATER FROM EUROPE.

Just as we were going to press, the Steamship Caledonia arrived at Boston, and we have received by express, our usual files of agricultural journals and magazines, up to the 4th of January.

The commercial news is considered decidedly favorable in all respects. Money is very abundant, and at an extreme low rate of interest. The best paper is discounted at from 2½ to 3 per cent. per annum, and we might at this time be in the enjoyment of any reasonable amount of money from Europe, had it not been for the doctrines of repudiation.

Introduction of Meat and Cattle into France.—The French Ministry propose introducing a bill into the Chambers, reducing the duties on meat and cattle. We do not find the details of this bill, and are consequently unable to say how far this will benefit American products.

Mortality of Cattle in Egypt.—Upwards of 200,000 oxen have already died of an alarming disease among cattle in Egypt, which has made draught animals so scarce, that the Pasha has been obliged to order his own horses and camels, and those of his chiefs, to be used for agricultural purposes.

The weather in England is uncommonly mild for the season, and the wheat crop looks very promising.

Markets.—Flour is dull—Tobacco steady; Cheese, Beef, and Pork are at nominal prices; but it is thought an active demand will soon take place for the two latter, as it is ascertained now that live cattle cannot be imported from the Continent to compete with salted provisions, which will be all in favor of shipments from the United States. Hams properly smoked and cured, after the Irish fashion, it is thought will do well. Lard is held firmly, and the price is advancing.

The demand for Cotton had increased, and the sales at Liverpool from the 2d Dec. to 4th Jan. had been 122,920 bags. The culture of cotton in some parts of India had not proved as favorable as was anticipated, on account of the dryness of the climate; and notwithstanding the great crop expected from this side of the Atlantic, and the large quantity on hand, it is thought that the sales at about present rates will be quite equal to the importations.

Corn Laws.—They continue to agitate the question of the Corn Laws with great force in the manufacturing districts; but we can see nothing yet which leads us to suppose that a fixed duty will be proposed by the Ministry at the coming meeting of Parliament. In the mean while, the *iniquitous gambling*, sliding scale, is working badly for the corn factors, and among other victims to it, we notice Mr. Dunn, of Wakefield, who has failed for $1,500,000.

Smithfield Cattle Show.—The papers are full of the proceedings of this splendid show. The London News contains nine large engravings of the scenes and animals there, and a medallion bust of its able and indefatigable President, Earl Spencer. It is said to have been the best show that has ever yet taken place at Smithfield, and crowds of people thronged it from morning till night, so long as it continued. Among the distinguished visitors, we notice Prince Albert—and no dandy was he there, either; but turned up the cuffs of his coat sleeves like a thorough-going regular breeder, and handled all the prize animals present except the pigs. The Prince has latterly taken strongly to farming, and is said to have got a regular practical working concern, in the vicinity of Windsor. Success we say to the royal husband of the Queen—he is a clever fellow in more ways than one, and we hope that some of our would-be-aristocratic republicans may profit by his example.

The London New Farmers' Journal we find as usual, full of able and interesting matter. Mr. Prideaux continues his contributions on manures, and Mr. Chatterly and Mr. Hall give an account of experiments which they are making with them on their example farm. One of the editors, with whom we had the pleasure of an acquaintance when in London, informs us that he had traveled through Canada, and most of the United States; we therefore bring him as a strong witness in favor of the good quality of American provisions, which others have endeavored to cry down so lustily. In their paper of Dec. 5th, he emphatically says:

"We declare, and stake our reputation upon the averment, for we speak from personal experience, obtained in almost every State of the Union, that *finer meat* than the *American Indian-corn-fed pork cannot be found in the world.*"

From the above Journal we glean some items of news, most of which we present in a condensed form to our readers.

Horticultural Expedition to China.—China has long been known to possess many rare and valuable trees, shrubs, fruits, and flowers, which have not yet found their way to Europe. From thence come our beautiful Azeleas, Cammellias, and Wistaria (Glycine) Sinenses. Taking advantage of the opening of Chinese ports by the late treaty, the Horticultural Society of London has resolved to send a person well qualified for the undertaking, to bring home all he finds worthy of introduction into England. Among the fruits there, the Pekin peach is said to weigh *two* pounds, and nothing is more melting and delicious.

Our own Government of the United States has it in contemplation to fit out an embassy on a liberal scale to China; and we hope among other important matters, that the subject of agriculture will not be forgotten. In the mean while, we shall call the attention of the officers of our merchant ships about to sail on their annual voyages, to these matters, and see what we can do in our humble private way.

A splendid silver tea-service, valued at $500, has been presented by a large company of gentlemen to Mr. Shaw, editor of the London Farmers' Magazine, and late Secretary of the Royal Agricultural Society, for his zeal and labors in promoting the cause of agriculture.

Color of Plants, and its influence in causing Rust and Mildew.—Wheat with the outward skin of a *purple* color, is more liable to be affected with rust and mildew, than the varieties with *yellow* straw. Russia yellow top, and yellow flesh turnips, are found to be far superior to the purple or green tops.

The Gardeners' Chronicle contains a full report of Dr. Playfair's Lectures on Animal Physiology. He has some new and rather startling ideas, but handles the subject with uncommon ability. We shall revert to the lectures hereafter.

Edinburgh Quarterly Journal of Agriculture.—The December number of this journal contains nine articles devoted to agriculture, and a supplement of five more, being the Prize Essays and Transactions of the Highland Agricultural Society of Scotland. We have had time yet to look over those only on Water Meadows, English Agriculture, and Jersey as regards its Husbandry and Agricultural Classes.

The Florist Journal has splendid engravings, colored and drawn after nature, of two dahlias. They are large and beautiful flowers. The first is of a rich purple color, and is called Sir Robert Sale, the second the Rival Yellow, and is of the color its name indicates.

The Gardener and Practical Florist.—In this work we find an article upon the management of Horticultural Shows, with engravings to illustrate the text of the writer, which are well worthy the attention of those who are engaged in getting up these sort of things in our own country.

The Horse.—Mr. Youatt is publishing a second edition, with numerous additions, of the same work which he wrote for the Society for the Diffusion of Useful Knowledge. Part VIII. is the latest we have received.

Lectures on Agricultural Chemisty and Geology, by Prof. Johnstone.—We are now in receipt of Part III., No. 24, of these Lectures. This number treats almost entirely on the use of Lime as a manure, and the lecture is written with the usual ability, clearness and force of this distinguished writer.

To the Ladies.—We wish we could show you the Botanical Register and Paxton's Magazine of Botany, for they are full of *colored* engravings of the rare and beautiful flowers, which are monthly introduced into England from Australia, South America, the Indies, and other remote quarters of the world. We are sure if you could see these, that you would love the country the more—dispense with some of the gew-gaws that encumber rather than embellish you, and take at once to the study of the fair and beautiful creations so much resembling your gentle selves. We think the field of Botany more peculiarly fitted for you than for the rougher sex, and we should be pleased to see you occupy it to our entire exclusion.

London Farmers' Magazine for January.—The first portrait is that of Thomas William Coke, late Earl of Leicester, and we will add, for a still greater title, the friend of America and the liberal and enlightened farmer. He is a noble, portly-looking man, with one of the best balanced heads we have ever seen. His eyes are large, deep and expressive; his nose prominent and slightly aquiline; and the mouth eminently handsome. A memoir accompanies the engraving, written by Cuthbert W. Johnson, Esq., author of the Farmers' Encyclopedia; but we do not find anything particularly new in it, that has not before appeared in the American papers.

The second portrait is the celebrated coach-stallion, Faulconer, that took the first prize as a roadster, at the great Yorkshire meeting at Hull, in 1841, open to all England. We recollect seeing him there at the time, and a splendid horse he is too, nearly thoroughbred, 16 hands high, and of iron grey. But we know several horses in our own country that we think at least his equal, and we are pretty certain over a trotting course, would prove themselves his superior both in speed and bottom.

We did not get hold of this number till we were just going to press, and can therefore give no synopsis of its contents. The Journal of the Royal Agr. Society we miss entirely, which we much regret, able as its articles always are; but we suppose it will soon be at hand,—and perhaps our readers may exclaim that they have a surfeit of foreign agricultural news already; and if so, we shall give them less the next time. Still, so long as Europe is in advance of us in these matters, we do not know to what source we can look for more interesting and valuable matter than we find here to enrich a few pages of every number of our Journal.

Editor's Table.

NOTICES OF THE PRESS.

Prime Facts for the Farmer, the Fruit Grower, and the Public.—This is a neat octavo pamphlet of 64 pages, treating of the slobbers in horses and cows, the slobber-grass, diseases and remedies of the plum and the peach tree, &c. &c., illustrated with several engravings. From the cursory perusal bestowed on this work, we like it, and shall give extracts hereafter from its pages. It is edited by Mr. R. Bartlett, and published by Nafis & Cornish, 278 Pearl street, price twenty-five cents.

The Indicator: A Magazine for Young Men and a Miscellany of Self-Improvement.—This is an excellent periodical of 64 pages, issued every two months, price 25 cts. per No., or $1.50 per annum. Its title indicates its object, and from a perusal of some of the papers, we think well of them, and most cheerfully recommend the work to the young men of the country. Jacob Townsend, *Editor.*

The Western Farmer and Gardeners' Almanac, for 1843. *Cincinnati: Published by Charles Foster.* This is an excellent work for the farmer, of 92 pages, neatly printed, and handsomely illustrated with a large number of engravings of animals, and scenes of rural life, designed by the editor, Mr. Foster, and engraved by Lovejoy. We do not know its price, but presume it is the same as last year, 25 cents, and very cheap at that. We recommend it to all who wish either amusement or instruction in an Almanac. One of the engravings, we notice, is a sketch of our friend and correspondent, Solon Robinson, Esq., which we recollect Mr. Foster's showing to us at Cincinnati the past winter. It conveys a pretty correct idea of the man, although it is not as well developed and good-looking as the original.

The Muck Manual for Farmers. By Samuel L. Dana. *A second edition, with additions. Price 62½ cts.* We have received the above valuable work from our own publishers, Messrs. Saxton & Miles; and as we spoke very highly of the first edition, in the June No. of this paper, we need only add, that it has become more valuable by the later additions of the author, and its merits are now so well established, that every farmer's library must appear incomplete without it; and it is so very cheap that none can refuse to purchase, and the reading of it may put one in the way of earning as many extra dollars, perhaps, as the little work has cost him cents.

Proceedings of the Henrico Agricultural and Horticultural Society.—We thank the editors of the Southern Planter, Messrs. Botts and Burfort, for the above pamphlet. We have looked it over with interest, and quite agree with our friends as to its ability. Virginia is a fine old State, and we like many of her doings.

Works of Jane Taylor.—We acknowledge the receipt of the complete works of this admirable woman and gifted writer. They ought to be placed in every family in the land. They consist of her memoir and correspondence, essays, tales, and poetry, all of which are of a highly intellectual and moral cast; and we are led more particularly to notice them, because *rural* subjects are so frequently their theme and illustration. These volumes would be much more suitable for the District School Library than many that are placed there; and we recommend their selection for this purpose to the Superintendents throughout the State. The work is in three beautiful volumes, of nearly 500 pages each, and are sold at the low price of $3. We should like to make some extracts, but our limits forbid. Saxton & Miles, *Publishers.*

Natural History of New York.—Three more of these superb volumes are now out, consisting of Dr. Becks Report on the Mineralogy of the State, Dr. Emmons' Geological Report of the Second, and Dr. Vanuxems' of the Third District. When we say that these Reports are written with clearness and ability; that they are accompanied with plates and maps illustrating the text whenever it was thought expedient, even to a minute degree, all can judge of their interest and value; and to the volumes themselves, we must refer the scientific reader for a knowledge of their contents. Six vols. are now out, and they may be found at the Bookstore of Messrs. Appleton & Co., 200 Broadway.

Book of the Farm, *by Henry Stephens, editor of the Edinburg Quarterly Agricultural Journal,* to be completed in 2 vols. Here is another of those splendid works upon Agriculture, which the British press is continually pouring forth to interest its farmers. We are indebted to Messrs. Wiley and Putnam for a perusal of the first volume, the only one yet received. It is of royal octavo 670 pages embellished with numerous engravings, done in a superior manner, and it is pronounced the best work of the kind ever yet published. The price here is $8 per vol., which is cheap when we consider the value of the contents, and the style in which the work is got up.

The Lady's Annual Register and Housewife's Almanac, *for* 1843.—This is a pretty work for ladies, and its contents may be judged of by its title. We think, however, it would have been better adapted to its purpose, had it contained more practical matter and less of poetry and sentiment. There are 107 pages in it, with numerous engravings, price 37½ cents. *T. H. Carter, Boston.*

The Floral Cabinet, *James Hogg, editor,* published by Dayton & Newman, 199 Broadway, at Four Dollars a year in advance, or 37½ cents per No. of 16 pages, quarto, with colored engravings. Mr. Hogg is a practical Florist and Nurseryman, and the No. of the Cabinet now before us, seems to be edited with as much ability, and is got up in as beautiful style, as similar European periodicals, and has the advantage of being afforded at about half their price. New York wants a work of this kind, and we hope that she will second the enterprise of Mr. Hogg, and come forward and generously support it. The embellishments for January No., is the *Franciscea undulata* in full flower, drawn and colored after nature.

The Magazine of Horticulture and Botany, *edited by C. M. Hovey,* of Boston, containing 40 pages, monthly, with engravings of fruits and flowers, price Three dollars a year. By the courtesy of the editor, we are favored with the January No., being the first of vol. 9 of this excellent work. For some time this has been the only periodical of the kind published in the United States, and it has been so long and favorably known, that it will scarcely need praise of ours. We observe among other articles, one on the Stone Pear, written by Mr. Ernst, of Cincinnati, Ohio; and we have read it with the more interest probably, from the fact of having often visited his fine, ample gardens and nursery, in this most beautiful of all western cities.

The American Review and Metropolitan Magazine, edited by an association of gentlemen, and published every two months in octavo numbers, of 100 pages each, by Saxton & Miles, price Three dollars per annum, payable in advance. We have read the first No. of this elegant periodical, and can assure the public that the articles are written with unusual spirit and ability; but notwithstanding all this, it could not receive a notice in this paper, till we were assured that agricultural literature will have a due share of its attention, and such as the importance and interest of the subject commands at present in Europe.

The Turf Register, containing 64 pages monthly, handsome octavo, together with the American Racing Calender, illustrated with highly finished engravings, edited by Wm. T. Porter, and published by J. Richards, corner of Broadway and Barclay street, New

York, price Five dollars per annum, payable in advance. Although no sportsman in the common acceptation of the term, we yield to none in admiration of that noble quadruped the horse, or affection for the friend of man, the dog, and love and enjoyment of all manly exercises in the open air. Of course with these predilections, the Register has always been favorite reading with us. It is the only *authentic record* of blooded stock in the United States, and is especially devoted to breeding, training, and sports of the field. It is got up in fine style, and compares favorably with similar English periodicals. The engravings for the January No. are the Hen Roost, a comical affair, and that phenomenon of racers, Fashion, with her honest clever little jockey, Joe Laird, upon her back. She is a splendid creature, showing great power and substance; but as we propose to ourselves the high gratification of soon calling upon her, in company with Mr. Porter, at the hospitable mansion of her owner, Mr. Gibbons, we shall defer further talk upon these matters till that happy period.

The Spirit of the Times, edited and published as above. Who has not cognisance of the "*Spirit*," and a certain personage that embodies it—'ycleped the "tall son of York." If any one *can be* so ignorant, we will only say, that with kindred subjects to the Turf Register, it unites all sorts of sports and amusement, and whenever we feel dull and moody, we have only to take this *down*, when it is sure to take us *up* and drive the blues beyond speaking distance. Its contents are more light and varied than the Register, and this also is superbly embellished. A portrait will soon appear in it, of Col. Johnson, of Virginia, most truly entitled the "Napoleon of the Turf," although he here and there gets a Waterloo defeat, as in the memorable instances of Eclipse and Fashion. A portrait of Fashion also, will soon appear here, on a much larger scale than that in the Turf Register, besides other things in progress, which will be announced in due time. The Spirit of the Times is a large folio sheet of 12 pages, weekly, price Ten dollars a year.

Several of our contemporaries have made their appearance in the commencement of a new volume the past month. We intended to have noticed them all in this number, but the foreign news has compelled us to forbear till the next.

TO CORRESPONDENTS.

We have received from Mr. Collins, of Hartford, Chairman of the Committee of the N. Y. State Agricultural Society, on cows, heifers, and calves, comprising classes V. VI. VII. and VIII. a manuscript copy of the report which was made on this subject, at the late annual meeting; and we must say, that it is one of the most valuable and searching documents of the kind we have ever read; and so completely harmonizes with our own views of the matters of which it treats, that we shall publish a good part of it next month, and other portions from time to time, as texts for some reforms in agricultural shows, which we propose to give for the consideration of our readers hereafter.

Mr. F. W. Stillman's letter, enclosing a sketch of Mr. Cones newly invented Dynamometer, having been left at the office of the American Institute, we did not get it till too late to insert in this No. of our paper. We have now received a letter from Mr. Cone, accompanied with a drawing explaining the Dynamometer more at length, this will appear next month. We are not the less obliged to Mr. Stillman for his prompt reply to our wishes, and only regret the letter had not been dropped into the Post Office, we should have then got it the same day. E. Cornell, an Illinois Farmer, C. M. Gidings, John J. McCaughan, and M. W. Phillips, will appear in our next. We are also happy to say that the two first Nos. of a series of Essays on fine woolled sheep are at hand; and these will be continued monthly hereafter, till the whole subject and its bearings is fully discussed. The writer has great experience in sheep husbandry, has traveled extensively in Europe, and made his own importations. We are also to have a series of Essays on the middle woolled and mutton sheep, by one who has resided in Europe some time, and long bred the animals about which he will discourse. We can promise our readers a rare treat from these able essays. They will be accompanied by engravings illustrating the subjects. Some other communications are under advisement.

☞ Notices of the Annual Fair of the Planter's Club, at Hancock, Georgia, and Mr. Colman's intended European Agricultural Survey were put in type, but owing to miscalculation, room was not left for them. They will appear in our next.

☞ WE WISH ESPECIAL NOTICE TAKEN OF WHAT FOLLOWS :—

We print on the first page of every number of our paper, that **Postmasters are permitted by Law, to enclose money for Subscriptions, and order our paper Free of Postage.** And yet we are taxed more or less every day by orders without this precaution. The postage of a letter may seem a small thing to talk about, but suppose according to our present terms, a correspondent encloses two One Dollar bills in a letter, and puts it into the mail himself, expecting Three copies of our paper; the result is, perhaps, that we are taxed 25 cents for the letter and 25 cents for each bill so enclosed, making 75 cents in all, which deducted from $2, leaves $1 25 to the publishers, or less than 42 cents for each volume of the American Agriculturist, and perhaps a *discount* on the money then at that. We beg our subscribers to pay attention to this, for our postage in the aggregate is a heavy bill.

THE NEW WORLD AND OURSELVES.

We have engaged to contribute from time to time through the present year, a series of papers to the above ably conducted Family Newspaper, to be called Agricultural Tour in England. These will not be so strictly confined to the subject of agriculture as the numbers which appear in our own columns, but will take a more discursive range, and treat of all such matters as fell under our observation while abroad, which we may think likely to interest so large and general a class of readers as constitute those of the New World. We shall also insert a short summary weekly, of agricultural news, both foreign and domestic; all which cannot fail to give additional interest and value to this paper.

The New World is now published exclusively in the Royal-octavo size, than which nothing can be more convenient for binding, or to adorn one's library. Its contents are of a high moral character, and each number has a clear and well arranged digest of the news of the week, political, social, literary and miscellaneous—including all matters which are of real interest, foreign and domestic; and we can assure our readers, both in town and country, that they will find this among the *very best* family newspapers of America; and in subscribing for it, they will desire little else. It is published weekly, and contains 32 pages, double columns, Royal octavo, in clear type, on fine paper, handsomely embellished with numerous engravings; making a superb volume of 1664 pages, at the low price of THREE Dollars a Year. Park Benjamin, editor. J. Winchester, publisher, 30 Ann street.

In addition to the lighter literature of the day, published in cheap series at the New World office as fast as received from Europe, it will follow up its editions of Leibig's Agricultural and Animal Chemistry, by reprints of all the standard agricultural works of Great Britain, together with occasional translations from the French, German, and Italian; condensed, or at full length, with notes explanatory and additions by American gentlemen, long practically and theoretically acquainted with the subjects of farming, horticulture, and stock breeding.

☞ Our exchange papers will confer a favor upon us by noticing the above arrangement.

AGRICULTURAL SOCIETIES.

Transactions of the Hartford County Agricultural Society for 1842.—We are indebted to an unknown friend for an octavo pamphlet of 90 pages, containing the doings of this spirited Society. The Address before it by S. H. Huntington, Esq., is eloquent and to the point; nor are we less pleased with the Reports of the different Committees, particularly the one on Farms, which strikes us as a thorough searching document. They have gone into the whole minutiæ of capital, crops, expenses, and net profits. Mr. Doolittle's farm pays 12 per cent. profit on the capital, Col. Rowe's 12 5-16, Mr. Deming's 12, Mr. Hart's 13¾, Mr. Thompson's 10, Mr. Alden's 13⅜, Mr. Tudor's 12, Mr. Bartlett's, (adding 2 per cent. for improvement,) 13½, and Mr. Peck's 10½ per cent. Certainly, with such results as these before him, and at this time particularly, no farmer should complain.

The Reports on Cattle and Sheep show that a taste for fine stock is on the increase in this county; but of that on swine, what will Mr. Lincoln say, when he hears, under authority of a grave Committee, that "the pigs of Hartford County are far *better bred,* and far *more moral* than those of the staid and sober county of Worcester, (his own strong hold), for at the last Fair there, the festivities of the occasion were interrupted by a *sanguinary duel,* between two boars, and the turf on the beautiful green of Worcester was stained with hoggish gore!"

We beg leave to interpose our caveat here, and gently hint to the Hartford Committee, to be a little more careful how they report hereafter; for we have the best of authority for asserting that they are in great error; and that the aforesaid "sanguinary duel," was nothing more or less than an attempt with their tusks for razors, at a mutual *shave,* in order to give themselves a neater and more gentlemanly appearance on the day of the show; and that the "gory stains" were in consequence of accidentally splitting their mouths with an uncontrollable fit of laughter, and losing three teeth each, in addition, at the bare idea of the comic sententiousness which would be sure to flow from the pen of a certain nameless Governor, who has hitherto rode it rough-shod over every *Sus Aper* course in the Union, where he has happened to appear mounted upon his *cachinnatory* Pegasus.

AGRICULTURAL STATE FAIR OF LOUISIANA.—We see by the New Orleans Tropic, that this Show and Fair was held on the 14th January, at Baton Rouge. A large assembly of planters and their ladies were present, and the thing went off with increased spirit over that of last year. The Hon. Henry Clay, of Kentucky, was a guest, and gave additional interest to the meeting. We have not space to give even the names of the successful candidates for prizes, but in addition to samples of cotton, sugar, rice, horses, cattle, asses, mules, sheep, swine, goats, domestic manufactures, &c. &c., it will sound rather odd to our northern readers to hear of fruits, flowers, and vegetables, fresh gathered and exhibited in the open air in the middle of January. Col. Harney had out his splendid regiment of United States Dragoons, now stationed at Baton Rouge, and the Fair and parade were concluded by a brilliant fête and ball in the evening, at which say the whole seven of the editorial corps present, the ladies were particularly lovely and agreeable. We dare say, for why should they not be on so exhilarating an occasion as an Agricultural Fair and Show.

POSTAGE.—We have received the special Report of the Post-Master General, as also that of Mr. Merrick, Chairman of the Committee on Post-Roads and the Post-Office in the U. S. Senate; and we must confess that we are greatly chagrined and disappointed at the trifling reduction in the rates which are proposed in the first report. We pronounce the present laws of the Post-Office Department as anti-social, anti-democratic, anti-republican—an extortion upon the farmer, and out of all reason compared with the present prices of his produce. Twenty-five cents is the price of a bushel of wheat in the interior of the west, of 2½ bushels of corn, of 20 lbs. of pork, or of a quarter of a ton of hay; and we have just paid the same amount for the transportation of two letters, weighing one ounce each, from New Orleans, as we have per bale (weighing nearly 500 lbs.) of a lot of cotton—viz. Two Dollars. This also is the price at which we offer THREE vols. of the American Agriculturist, containing 1152 pages, double columns, of imperial octavo, with fine type and paper, and embellished with numerous engravings!

The rates now proposed by the Post-Master General, is on all *single* letters sent by the mail any distance not over 30 miles, - - - - - 5 cts.
Over 30 to 100 miles, - - - 10 "
" 100 " 220 " - - - 15 "
" 220 " 400 " - - - 20 "
" 400 " - - - - - 25 "

This strikes us as a *Reform* with a vengeance.

The rates of Postage which we would propose, should be 5 cents per ounce for all letters 100 miles and under,
10 " " " over 100 miles and under 500,
15 " " " over 500 miles.

We are confident at these rates, and putting an end to the franking privilege, that the revenue would be increased rather than diminished, after the first year; and at any rate such a reform as we propose will promote the dissemination of knowledge among us, tend to enlighten and elevate the character of the Republic, and take away the odious exclusiveness that now attaches itself to this Department, and renders it so burdensome to the people. In aristocratic England, the postage formerly was twice what it is in the United States—now it is only *one penny* on letters transported to and from the remotest bounds of the United Kingdom.

CITY MANURES.—The Corporation has let the cleaning of the streets of this city for five years, at the rate of $64,500 per annum. Other parties offered to take the contract for much less than this, and one proposal was as low even as $24,935; but as the cleaning of the streets had cost, on an average, upwards of $106,000 per annum for the last three years, the Corporation considered these very low offers as not made in good faith, and that the parties could not carry them into effect, and so rejected their propositions. They have entered their protest in the matter, and the refusal of giving the contract to the lowest bidder, has caused considerable dissatisfaction in certain quarters.

REVIEW OF THE MARKET.

Prices Current in New-York, December 31, 1842.

ASHES, Pots, per 100 lb.	$5 50	to	—
Pearls, do.	6 56	..	—
BEESWAX, Yellow, per lb.	29	..	29½
COTTON, Louisiana, do.	5½	..	9½
Upland, do.	5	..	8¾
Florida, do.	5	..	9
Alabama, do.	5½	..	9½
FEATHERS, American, live, per lb.	20	..	25
FLAX, American, per lb.	7	..	7½
FLOUR, Northern and Western, via Erie Canal, per bbl.	4 37	..	4 50
do. via N. Orleans,	4 12	..	4 37
Southern, per bbl.	4 12	..	4 25
RYE, per bbl.	3 00	..	3 25
MEAL, Corn, per bbl.	2 50	..	2 75
do. per hhd.	12 25	..	13 00
WHEAT, Western, per bushel,	80	..	87
Southern, do.	70	..	80
RYE, Northern, per bushel,	54	..	56
CORN, do. do.	50	..	54
Southern, do.	48	..	50
BARLEY, per bushel,	48	..	50
OATS, Northern, per bushel,	31	..	32
Southern, do.	23	..	24
PEAS, Field, do.	86	..	1 15
BEANS, White, per bushel,	1 21	..	1 43
CLOVER SEED, per lb.	6	..	6½
TIMOTHY SEED, per tierce of 7 bu.	10 00	..	10 50
FLAX-SEED, rough, do. do.	8 50	..	9 00
clean, do. do.	---	..	---
RICE, per 100 lb.	2 25	..	3 00
HEMP, Russia, per ton,	200 00		———
American, water rotted do.	——	..	—
HOPS, first sort, per lb.	9	..	11
LEAD, Pig, per lb.	3¼	..	3⅜
Sheet and Bar, per lb.	4½	..	5
OIL, Linseed, American, per gal.	75	..	80
PLASTER OF PARIS, first quality, per ton,	2 25	..	2 75
unground do.	1 81	..	1 88
BEEF Mess, per bbl.	6 12	..	6 75
Prime, do.	3 00	..	4 00
Cargo, do.	1 75	..	2 00
PORK, Mess, do.	7 50	..	9 50
Prime, do.	5 00	..	6 50
LARD, per lb.	6½	..	7½
BUTTER, best Table, per lb.	13	..	15
Western, good, per lb.	10	..	13
Shipping, do.	6	..	8
CHEESE, in boxes and casks, per lb.	5	..	6½
HAMS, Smoked, per lb.	7	..	9
Pickled, do.	5½	..	5¾
Shoulders, smoked.	—	..	—
BEEF, Smoked, do.	6	..	7½
SALT, Liverpool, ground, sack	---	..	1 47
do. fine, do.	1 62½	..	1 76
SUGAR, New Orleans, per lb.	3	..	5
TOBACCO, Virginia, do.	3	..	5
Kentucky, do.	2½	..	5
TALLOW, American, do.	7½	..	7¾
WOOL, American Saxony fleece, per lb.	32	..	37½
Full blood Merino do. do.	28	..	30
Half to three-fourths do. do.	24	..	26
Native to half do. do.	18	..	22
SHEEP PELTS, each,	---	..	—
HAY, per 100lb.	47	..	52
POTATOES, new, per bushel,	25	..	---
EGGS, per 100,	1 00		---

New York Cattle Market—Jan. 30.

At Market, 1050 Beef Cattle, (400 from Penn.,) 50 Cows and Calves, and 1400 Sheep.

Prices—Beef Cattle have sold at a less price than last week's quotations, and we quote at $3 50 a 4 50, for ordinary to fair, to $5 a 6 for prime. Market dull and 300 unsold.

Cows and Calves.—Prices range very wide, from $16 to 36, with occasional sales at $35. 10 unsold.

Sheep and Lambs.—All at market but 100 taken at $1 25 a 4, with a few lots as high as 4 50.

Hay —Prices rule very low, and 56 cents is the top of th market. Prices range from 42 to 56 cts, per cwt.

Remarks.—Since the late news from Europe, a large and active business has been done in cotton, but in consequence of freights rising, a trifling reduction of one-eighth has been submitted to in a few instances by holders. In Provisions generally few sales are effected at this present moment; holders seem to be waiting further advices from abroad, confident that there must be a slight rise. Flour and grain are dull in the extreme, and the few sales lately made were a little below last months quotations.

Money is very abundant, and Specie still accumulating in our Banks—Stocks have continued gradually to advance. The balance of the U. S. six per cent loan $5,700,000 has been taken in this city since the 1st of Jan., and it is supposed that it will be above par within six months.. Dew Rotted Hemp is quoted in Louisville, Ky. at $3 to 3 50 per cwt. Water Rotted $3 to $7 according to quality. 187,000 hogs had been killed at Cincinnati up to the 20th Jan. But notwithstanding this great number, the market for pork remained firm at from $1 75 to 2 12½ per 100 lbs.

The quantity of India Cotton imported into Liverpool in 1840, was 109,000; in 1841, 162,000; and in 1842, 169,800 bales.

☞ To Subscribers.—Our edition of the January No. of the American Agriculturist is entirely exhausted; but as the work is Stereotyped, we shall put a second edition to press next week, so that if our subscribers are not as promptly served as they anticipated, they will not be obliged to wait long.

We shall print double the usual number of copies for February, and trust that the desire for our paper among our friends will enable us to go on *doubling*, till we have a circulation of Twenty Thousand. Great improvements are in progress.

☞ **Terms.**—Ten cents for single numbers—Fifty cents for Six—and One Dollar for any Twelve numbers, or a Volume Complete. Three copies for Two Dollars.

☞ Remit *through* Postmasters, *as the Law allows.*

CHARLES STARR, JR.,
MENDHAM, MORRIS COUNTY, NEW JERSEY,

Will be prepared, the coming Spring, to execute orders for thorough bred Berkshire Pigs, from the imported boar Hagbourn, and a superior boar of Windsor Castle family, and fifteen choice sows, lately procured from A. B. Allen, of Buffalo, New York.

Pigs from this superior stock, from 2 to 3 months old, will be delivered, well caged on shipboard, at New York, for $25 to $30 per pair. Feed furnished when desired at $3 per barrel.

Persons desiring either pigs or full grown animals, can be supplied with all the advantages of Mr. Allen's stock at Buffalo, without incurring the risk and cost of canal transportation—the advertiser's residence being but half a day's journey from New York.

CONTENTS OF THIS NUMBER.

Editorial.

Corn cobs for Cattle,
Remedy for the Hessian Fly, ... 321
Credit Quotations,
Cvltivation of Hemp,
Anthracite Coal Ashes for Manure, ... 324
Crops for Soiling, ... 325
Sugar Beet, ... 326
Large Corn Crop of Mr. Young of Kentucky,
The American Institute, ... 327
Agricultural Club of New York,
Tour in England, No. 10, ... 328
Legislative Duties in regard to Agriculture, ... 332
December Notes from Buffalo to New York, ... 333
Orchard Grass,
Sheep Farm For Sale, ... 334
Worm Seed Oil for Bots,
Stacking Grain, ... 335
Our Terms,
To Our Subscribers,
Advantages of Agricultural Journals, ... 336
Our Office and Reading Room,
N. Y. State Agricultural Society,

Original Correspondence.

John Langdon, Sea Manure in New Hampshire, ... 337
The Isiand of Madeira and its Grape Cültivation,
Solon Robinson, Cost of a Farm and Raising Products on the Western Prairies, 338
Solon Robinson, cheap Beef and Tallow,
A. Beatty, Fatting Swine by turning them into Corn Fields in Kentucky, 339
Z. B. Wakeman, Crossing different breeds of Animals,
I. S. S., Lotion for a Bruise or Sprain, ... 340
T., Reclaiming Swamps and Stony Land,
L. F. Allen, Dorking Fowls, Wintering Stock, Threshing, Farm House, Mutton Sheep, White Carrot, Field Bean, Kitchen Garden, 342
James Shelby, Driving Durhams from Kentucky, 343
R. Harmon, Jr., Varieties of Seed Wheat and their Prices,
The Albany Cultivator, Annual Meeting of the N. Y. S. Agricultural Society, 334
Foreige Agricultural News, ... 346

Editor's Table.

Notices of the Press, ... 348
To Correspondents,
The New World and Ourselves, ... 349
Agricultural Societies,
Postage, ... 351
City Manures,
Review of the Market,
Advertisements, ... 252

THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

Vol. I. **New-York, March, 1843.** **No. 12.**

A. B. Allen, and R. L. Allen, Editors. Saxton & Miles, Publishers, 205 Broadway.

TO OUR READERS.

In closing the First Volume of the American Agriculturist, we cannot refrain from expressing our grateful thanks to our numerous friends and subscribers, for the encouragement they have given us throughout our arduous undertaking. It was a new and untried field, and if we have failed to produce as abundant and benificent a crop from it, as others might have done under the same circumstances, we trust with a little more experience, and the able assistance of the numerous corresponding friends who now surround us, that we shall succeed better hereafter, and give all that an exacting public may reasonably demand. For the Second Volume we propose the following improvements:—

1st. A new and beautiful vignet.

2d. A larger sheet, with a whiter and finer texture of paper.

3d. A greater number of embellishments.

4th. A more extensive and varied correspondence.

We have also at a considerable expense, greatly enlarged our subscription list of Foreign Agricultural Periodicals, and shall hereafter, as in the past two months, carefully condense their spirit and substance, into the largest space which can be allotted to this department, and thus strive to embody all that may promise to be of much practical utility to the farmer, stock-breeder, and horticulturist. This will be attended with a labor of which few of our readers can have any conception, but our hearts are embarked in the great and glorious cause of Agriculture, and our time and humble faculties shall be severely tasked to give it all the aid in our power. We look upon Agriculture as the FIRST OF SCIENCES, to which all others are but hand-maids; and the time will come, and that we trust shortly, when the majority of this great nation will so think and act. Let a revolution of this kind be brought about, and it would soon quadruple the productive wealth, the comforts, the conveniences, and refinements of the country. Is there any one then, in this wide land, who will not give his countenance and direct aid to Agriculture? All can do something—let every individual exert himself in its behalf.

Before closing this article, we have thought it advisable to say, that the first nine numbers of the work were got out under the direct supervision of the junior editor; from January, the senior editor is wholly responsible, his brother having returned to Buffalo, and he since making New York his permanent residence. Business of an important character requires the continuance of R. L. Allen in Buffalo; and in consequence of this, it has become his wish to retire from the responsibilities of the editorial department, and the work in future will be conducted by A. B. Allen as sole editor. R. L. Allen will continue his contributions as usual, but over his own signature, and he trusts that his appearance as a correspondent, will receive the sanction of the readers of the American Agriculturist, and not the less entitle him to their favor and indulgence. He will also take upon him the whole management of the stock at Buffalo hereafter, A. B. Allen no longer having the slightest interest in it whatever. His brother is a person of tried experience in the stock business, and it need not be feared that anything will suffer in his hands. The senior editor now comes before the public free and unembarrassed, with no claims upon his attention but those of editing this paper and serving his friends. To these objects hereafter, his whole care and attention will be unceasingly devoted, and he appeals for that support and countenance only, which he may be found to merit.

TO SUBSCRIBERS.

The 1st No. for April, of the Second Volume of the American Agriculturist, will be forwarded to all subscribers to the First, that they may know our continued existence. They will please keep and show it to such as will be likely to interest themselves in our behalf, but as the terms are strictly *cash in advance*, we shall discontinue sending to any who do not after the reception of the 1st No. comply with them. We have been solicited again and again to send the work out upon credit, but the low price at which it is offered will not justify us in so doing, and the publication would be attended with a serious loss. As most other agricultural periodi- begin their volumes the first of the year, it is our determination to commence the THIRD VOLUME of the American Agriculturist on the 1st of January, 1844.

Since we last went to press, subscriptions have continued to increase steadily, and we do not recollect a single State or Territory of the Union, which has not forwarded us a fair quota from its population. The British Provinces have also come in with their contributions, and we have every assurance to believe, that this paper will open its Second Volume, with as generous a subscription list as any other whatever in America. Its continued existence being now established, and its circulation permanent and extensive, it has become the medium of conveying knowledge to a large number, and we hope to be favored with a fair share of advertising patronage. All advertisements will be printed hereafter on the last page but one of each No. the markets, contents, and terms, on the opposite side; so that when the work comes to be bound up, the last leaf can be taken off, and it will then form a beautiful volume, with nothing in it but permanently useful and valuable reading matter.

HEMP IN RUSSIA.

We are indebted to the Hon. N. P. Talmadge, of the U. S. Senate, for a report December 20th, 1845, of the Secretary of the Navy, on the cultivation and manufacture of hemp. We gather from this, that in the experiments made between American and foreign hemp, when properly grown and prepared for market, the American proves the best. Mr. Gibson, our consul at St. Petersburg, estimates that Russia grows about 7,500,000 poods (120,000 tons) of clean hemp, nearly one-half of which she exports. We beg the attention of the west to this fact.

Colonel Todd, our minister at the same court, gives an interesting description of a tour into the interior of Russia, as far as Kazan, to examine the hemp crops of that country, and ascertain the method of cultivation. He finds that a soil impregnated with lime is the best for growing hemp, and seems to think that Kentucky is too far south for the better qualities, and recommends the western belt of latitudes from 41 to 43°. We cannot agree with Colonel Todd in this opinion, for facts, so far as our knowledge extends, are entirely against him.

HEMP AND CORDAGE IMPORTED INTO THE UNITED STATES FOR THE PAST FIVE YEARS.

From a manuscript document from the Secretary of the Treasury, for which we are are indebted to the Hon. Millard Fillmore, we see that during the years 1838, 39, 40, 41, and 42, the following amounts of hemp and cordage were imported into the United States, viz: 2,374,373 lbs. untarred cordage, valued at $113,024—7,665,226 lbs., tarred ditto, valued at $451,673—2,735,733 lbs., twine and pack-thread valued at $550,598—41,769,056 lbs. hemp, valued at $2,620,409.

It will be recollected that the above are the Custom House returns, and to express the value in this market where the articles are sold, about 40 per cent. on the average should be added.

ORNAMENTAL SHADE TREES.

We have often wondered why in this climate, where winter rules so long, and most of the deciduous trees are left destitute of their vegetation, nearly five months of the year, that a greater profusion and variety of evergreens are not cultivated, especially in the ornamental grounds immediately around the houses of our country residents. They lend a cheerfulness to the landscape, otherwise so dreary and bare at this season, that is quite delightful, and bestow a comfort among the grounds in sheltering them from the cold winter winds, which is not otherwise attainable. Pines, hemlocks, and firs, we have heard objected to by some, as conveying the idea of gloom, why we never could divine, for to us they ever appeared no less enlivening than beautiful, and we have always endeavored to promote their cultivation.

Perhaps one of the handsomest evergreen trees of America, of the medium size, is the *Abies balsamifera*, popularly known as the Silver or Balsam Fir.

The Silver Fir.—(Fig. 36.)

This is more usually found in Nova Scotia, the Canadas, and northern states; but it occasionally flourishes on the high mountains as far south as the Carolinas. It rarely grows above 45 feet high, or has a diameter of over 15 inches of trunk. The foliage is dense and singularly rich and beautiful; being of the brightest green on the top of the leaves, and beneath of a silvery white, and hence its popular name. It flowers in May, and the cones are quite fragrant. This tree produces a small quantity of resin, which is sold under the name of Balsam of Gilead in Europe and America. Its wood is of but little value. This and the next, are the most favorable months for setting out trees, in the latitude of 40°, and we have thought we could not do our readers a greater favor, than to call their attention to the Silver Fir, as one of the most ornamental among the evergreens, and particularly appropriate for adorning the grounds around the family mansion.

The best location for evergreens is a gravelly, sandy, or rocky soil. Certain kinds also do very well in a surface of light loam, when the sub-soil is a hard tenacious clay; others again flourish in swampy lands.

PINE BROWSE FOR SHEEP.

Pitch or white pine boughs are excellent for sheep to browse upon once or twice a week; they create an appetite and keep off disease. Cut down the saplings and drive the flocks to the grove, or draw them home to the sheep-fold.

TOUR IN ENGLAND No. 11.

Having a standing invitation from our excellent friend H., to visit him whenever convenient, after looking over the curiosities of the large manufacturing city of Sheffield, we concluded to test his hospitality, and at the same time take a lesson in English farming, of which he is a great amateur. We accordingly mounted the stage-coach once more, taking our favorite seat on the box alongside of the driver, and after a rapid set to of a couple of hours of "tooling the tits,* as our Jehu technically termed it, over a pretty, undulating country, we passed a wide common on which a tribe of gipsies had encamped, and were almost immediately set down in the neat and quiet old town of Worksop. Here we ascertained that the residence of our friend, Mr. H., was some eight miles distant; but his brother near by, learning that we were in the village, kindly welcomed us home, while he sent him notice of our arrival.

After cursorily looking over an exceedingly well cultivated farm, of a thousand acres, he ordered out saddle horses, and proposed a ride over the neighboring estate of the Duke of Portland, lying partly in Sherwood forest, famous for the feats of Friar Tuck, and the celebrated outlaw, Robin Hood, who in days of yore "entertained an hundred tall men and good archers," and according to the old ballad, was the prince and beau ideal of all captains of banditti.

> "Robyn was a proude outlaw,
> Whiles he walked on y grounde;
> So curteyse an outlaw he was one,
> Was never none y founde."

And the *historian* says: "He suffered no woman to be oppressed, violated, or otherwise molested; poor men's goods he spared, abundantlie relieving them with that which, by theft he got from abbeys and the houses of rich Carles."

The estate of the Duke of Portland is a noble one, the plantations flourishing, and the covers for the game, of fern and gorse, quite thick. The pheasants were so tame that we might almost have knocked them down with our whips as we rode along; partridges also were abundant, and hares and rabbits without number. The park was full of fallow deer, lusty and fat, and amounting to 700 head at least.* Most of these are spotted like American fawns, but a few are white, and others almost black.

Here are some of the largest trees we saw in England. The Welbeck oak, 3 feet from the ground, measures about 30 feet in circumference, and the Greendale oak, through which the Duke once drove his coach and four, we judged still larger. It is a very old tree, probably a thousand years, is hollow, and so decayed, that it has to be propped up on one side, and is preserved with great care and veneration. Would that we could say the same of more of our own larger and equally valuable trees in America; but there is a spirit of ruthless destruction of such things among us, especially in new settlements, which cannot be too greatly deplored. Yet we hope one day that an era of good taste will spring up in our land, which shall guard these aged monarchs of the wood, and preserve them with the same care and veneration that they now are in England, for they are our only antiquities.

The Duke of Portland, with all his splendor, is an excellent farmer and matter-of-fact man, and being absent from home, the steward was directed to let the sheep into the park with the deer, to pasture it; and here we saw beautiful flocks of South-downs in large numbers, feeding even upon the lawn close up to the front of the residence of their noble master. The hall is a fine old Abbey, and the housekeeper politely showed us over the state rooms, where we found beautiful paintings, costly furniture, and gems of art in great profusion. The private chapel attached to the Abbey, we believe is of Saxon origin, and is consequently of quite ancient architecture.

The stables are superb; in America they would pass for a stone palace. The servants are lodged in the second story of one wing of the quadrangle, and a pleasant residence it is too, for flowers were blooming in the windows, and many elegancies there that any person of taste could not but delight in. Here we found a pretty fair lot of racing nags, and some capital hunters, and after viewing the gardens, delighted with this princely estate, we rode home through a late purchase of the duke of Newcastle, where a large body of laborers were ditching and laying down tiles for draining in an extensive meadow, and further on our way, we passed the ruins of a fine old Abbey church on the borders of Worksop.

---

* A cant phrase with coachmen for driving.

* This may seem a large number to our readers, but other parks which we subsequently visited, we were informed, contained from 1,500 to 2,000, all belonging to one nobleman.

Upon getting back, we found our friend H. had arrived, and was waiting us; so after a late dinner, we set out for his hospitable mansion. This was built by the St. Legers; it is large and roomy, with octagonal projections, and plenty of out buildings in quadrangles in the rear, enclosing ample court yards. The door of the library opens into a large old-fashioned garden, with turf walks, trim box borders, formal fish-pond, conservatories, grass terraces, a venerable sundial, and high brick walls on three sides, to which fruit-bearing espaliers are trained all round. The garden was full of flowers, fruits, and vegetables; and as we are particularly fond of the two former, his kind and accomplished lady, regaled us morning, noon, and evening, with the second, and every night in our sleeping apartment, we found a large bouquet of the first, fresh gathered by her own fair hands, and adorning the pier table. Such things may be called trifles, but they add greatly to the pleasures and happiness of life. We had then passed about two months of most fatiguing travel, and were glad at last, to meet for a few days, with the agreeable repose furnished us at Park Hill, and accordingly while staying there, took matters quite easily; sauntering over the farm, patting the dogs, eyeing the game, examining crops, handling the cattle, settling the merits of a cart-horse or hunter, and taking lessons in general upon English agriculture.

On the third day of our stay here, Mr. H. proposed a visit to Wiseton, a few miles off, the seat of the celebrated Earl Spencer, to look at his stock of Short-horns. To this we most gladly assented, and he ordered out his fine black American trotter, hitched him to a two-wheeled chaise of Massachusetts fashion, which we think was also imported, and thus Americanised, away the high spirited animal tramped with a free and easy action over the beautiful MacAdam roads of old England, rapidly passing everything which we encountered along the road, without an effort, just by way of giving John Bull an exemplification of the Yankee *go-ahead* principle.

There is a most excellent road law here, which we could wish much to see adopted in America; and that is, to pass all you meet to the left instead of the right. And this is much more agreeable to common sense and convenience, and avoids danger very frequently; for if the teamster be walking alongside of his cattle, and do not leave them entirely, he is in danger of being crushed or injured, between his own and the wheels of the vehicle he meets; and besides, the driver always sitting at the right hand can more easily guard against striking the axles of his wheels when he passes to the left, which is a matter of no small importance in a crowded or narrow thoroughfare. We wish our city and state authorities would bring their attention to this subject, and alter the law of the road, making the *left* in reality the *right*, as we recollect once seeing expressed in an odd stanza of a rhyming wit.

> The rule of the road is a paradox quite,
> In riding or driving along:
> If you keep to the *left*, you are sure to go *right*,
> If you keep to the *right*, you go *wrong*.

We had an introduction to Earl Spencer, at the Yorkshire Agricultural Show, and it was much to our regret to learn upon arriving at his seat, that he had left the day previous for London, to move the address to the Queen in the House of Lords, at the opening of Parliament. Mr. Hall, the steward, we found at home, however, and he quite politely showed the estate and the whole herd of Short-horns. Earl Spencer has really some excellent animals, and has generally been successful in obtaining prizes for them at the great annual shows of fat cattle in the Smithfield market. Mr. Hall informed us that the Earl disliked exhibiting at the Agricultural Shows, so long as the public taste demanded loading animals with so much flesh, as he did not wish to endanger his breeders by over feeding for such exhibitions. Among his stock we saw several descendants of the famous bull Firby, figured by Youatt in his work upon British cattle. Judging from these, he must have been a superior animal, and upon the whole we were highly gratified with a view of the stock. Earl Spencer is certainly a judicious and scientific breeder, and an eminent practical as well as theoretical agricultor.

Among other things here, we were shown a specimen of uncommonly productive meadow, reclaimed from low swamps and ponds, where there was not sufficient fall in any adjacent stream to take off the water. The fields are embanked all round several feet high, so that water cannot flow in from without; a flume is then sunk lower than the meadow in a short raceway, to which all the water in it is drained by ditches. In this flume, driven by wind-mill power, a large scoop-wheel is placed, which, as it revolves, takes the water up in its buckets, and deposites it on the other side of the dike, from which it flows off, thus keeping the meadow perfectly dry when necessary, in all seasons. When there is not sufficient wind to move the water-wheel, steam power is applied from an adjacent building for this purpose. This may be considered as a very expensive business by Americans, but when we consider that a steam engine, with one bushel of coal, which only costs a few cents, will raise 50,000,000 lbs. of water one foot, it will not be thought quite so formidable an outlay of capital. Several districts in England of thousands of acres in each, are thus reclaimed from the sea and drained.

Everything about the estate of Wiseton, was in order. The houses of the laborers are handsome two-story stone cottages, with flowers trained up their walls, trim hedges and grassplots in front, and good gardens in the rear. They are such buildings as any of our independent farmers at home might covet for a residence, and we were informed that the Earl never suffered his tenantry to go to the poor-house; for if at any time in want, they are amply provided for at home by himself. Mr. Hall, the steward, was as neatly dressed as if he had just emerged from a bandbox, rather than a cattle yard; with polished shoes, neat gaiters, and well set small clothes. His own residence was charming, with pretty gardens about, and a well stocked conservatory. But the steward or bailiff of a nobleman is a pretty important personage, and is generally much looked up to by the surrounding neighborhood, for they are frequently well educated men, and scientific, as well as practical breeders and farmers.

Earl Spencer is a fine looking man, over fifty, though he does not look it. He has a keen dark eye, florid complexion, good height, and reasonably stout person. He was a long time leader of the House of Commons when Lord Althorp, and had a seat in the Whig Ministry under Earl Grey. He is quite farmer-like and gentlemanly; plain in his dress, and we were informed, rather diffident and retiring in his manners. He is very popular with the agricultural classes, and has done more to promote improvements in husbandry, than any other nobleman of his day in Great Britain. If he would accept office, in any future change in the ministry, he would be very likely to come in as Premier; but he dislikes politics, and except when he thinks duty imperiously calls, mingles little in state affairs. His pride and pleasure seems to be in attending agricultural shows, and holding converse with the intelligent farmers and breeders of the country. To all such men, whatever be their rank or station in society, we wish long life and all happiness.

SHEEP HEALTHFUL TO OTHER STOCK.

A VARIETY OF STOCK THE MOST ECONOMICAL FOR THE FARMER.

We are advocates for that system of stock raising, which gives a reasonable variety to the fields and yards of the farms. In addition to yielding a more general supply for the owner's use, and thus carrying out the great principle every farmer should practise, *to buy nothing he can produce within himself;* there is great economy and profit in it. There is generally in every field a variety of plants which are suited to different classes of animals; the horse selects one or more which he crops closely; the cow fancies others which she browses upon till exhausted; while the sheep follows after and nips what both have rejected, and is moreover peculiarly useful in exterminating, when not over fed, most of the noxious weeds that infest the pastures. In the hay-rick, too, the same preferences are exhibited; the orts thrown out from the horse-manger are eaten with avidity by the cows and sheep, and the latter picks up the merest leaflets neglected by the others. Thus Providence seems to sanction in the diversity of the vegetable creation, the propriety and advantage of distributing and appropriating them among numerous species of animals.

We are strengthened in our conclusions, by the beautiful yet simple legend which is related of the well-provided travelers, who, while eating their full repast by the way-side, were accosted by a beggar, whose cravings were appeased by what they had rejected. The beggar's dog made a bountiful meal on the bones his master could not eat. The sparrows followed and fed themselves and young from the crumbs, and the ants then gleaned treasures for themselves and progeny. The story might have been continued by adding as many more successive banquets for the invisible creation which the microscope would have revealed.

Every farm should be supplied with a few of the hardier kind of sheep. They cost little for keep, require trifling attention, yet how much they administer to the wants of a household. The warm clothing they furnish, how comfortable in the inclement season of the year, from the woollen cap and tippet, through all the under and outer garments, to the soft hose and health-preserving oversock. They cover our beds in the wintry nights, and they cover our floors with carpets, which afford a warmth and luxury to our feet a sultan might envy. And how easily all these articles may be procured from a few choice fleeces? When not convenient for the housewife or her family to manufacture them, they can be readily made into the different kinds of fabrics on shares, or exchanged for such as are already prepared; or they are ever a ready sale at fair remunerating prices. And how agreeably too, is the pork barrel eked out by the luscious, well-fed quarters of the mountain lamb, and the fresh meat of winter, varied and prolonged by the stall-fatted mutton. But we must not enlarge on so familiar a subject, and will only add a paragraph, which we find credited to the Farmers' Journal, so appropriate and so beneficial to the farmer's interest, that we bespeak for it a careful perusal.

"The orts of sheep are sometimes found to possess medicinal virtues for other stock. We once owned a sick horse, whose disorder seemed proof against other medicine, and by keeping him wholly on sheep's orts, which were mostly raked out of the manure, where they had laid for a month or two, and which were readily eaten, a speedy cure was produced. We know not enough of *horseology* to determine what the disorder was. It was attended with a severe cough, loss of appetite, leanness, and general debility.

"It has been stated, and by our observation confirmed, that calves that run with sheep, are never infested with lice, and not liable to disorders, and this method of taking care of them is very convenient, as they may be kept in a yard with the sheep, separate from the other cattle, and watered in the morning before other cattle are turned out, which are liable to disturb or injure them. After the stronger cattle are housed early in the evening, the calves may again go to the water in peace and safety. When calves run with sheep, it may be well to tie them up a part of the time in the latter part of winter or in the spring, else they will be more difficult to manage the second winter, if not accustomed to confinement and frequent handling to tame them the first winter.

ENGLISH TARIFF ON AMERICAN PROVISIONS.

We notice under date of Dec. 14th, in our files of English papers, that it is announced by an *official note* from the Privy Council of Trade, that "the hams smoked and dried in Canada from American salted pork, would be subjected to the same duty as hams of Canadian produce, viz: 3s 6d per cwt.

This official announcement of reducing the duty 75 per cent, on one important article, corroborates our suggestion in the Dec. No. of our paper on this subject, that the British Government are willing to take our products at the rate of the Provincial duty, if Americans choose to give English merchants and their shipping all the profits of the business.

We also notice, that a part of the Canadian loan, we suggested as having been arranged for the benefit of their internal improvements, to carry out the above policy, has been offered to the English capitalists, all of which will be taken on the most favorable terms.

RESULT OF BREED IN SWINE.

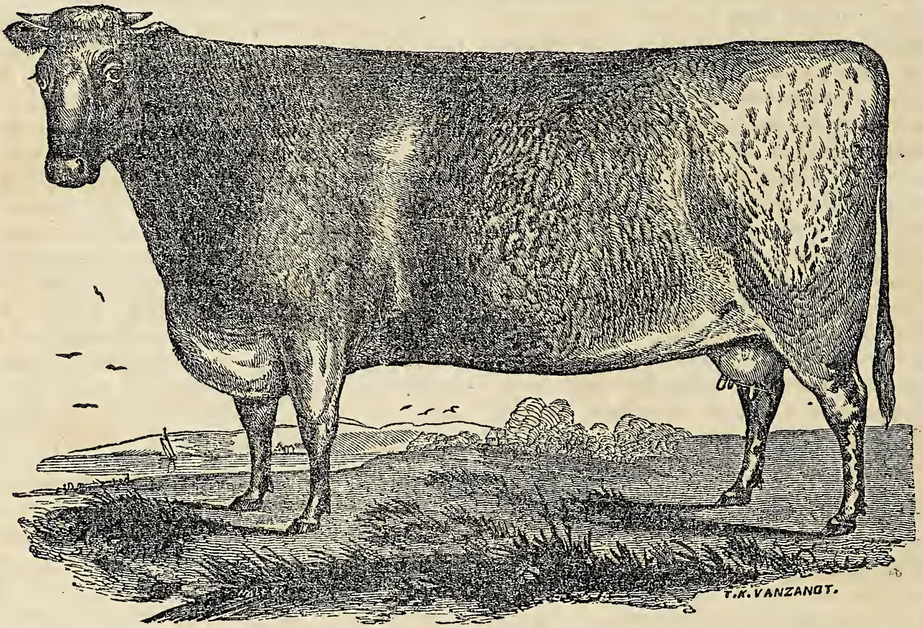
Mr. J. R. Williams, of Buffalo, gave us a statement a few days since, by which some of our readers may be benefited, as illustrating the difference in *breeds*. He bought two pigs last spring, about six weeks old, for which he paid $3 00. His object in procuring them was for *the breed*, as they were so small and indifferent at that age, that both occupied less than half the space in the bottom of a flour barrel. He took good care of them from that time, and kept an accurate account of the feed, which was principally corn meal, (for which he paid 37½ cents a bushel,) with an occasional addition of oats, &c., all of which cost something less than $20. They were slaughtered in December last, at the age of nine months, *precisely*. When dressed and hung up for two days, they weighed in the presence of several witnesses, 304 and 310 lbs., total 614 lbs. It will be seen, after deducting the toll, one-tenth, for grinding, *they returned 1 lb. of pork for every 4 lbs. 6 oz. of corn consumed.*

But this is but part of the account. While other good pork was selling freely in the market for 2 and 2½ cents per pound, he was repeatedly urged to take 4 cents for these pigs, but says he can do much better with them by packing. He fatted some nearly as good last season, and what was not required for his family use, he readily retailed at 8 cents, on account of its superior quality and flavor, while other good pork was selling at 5 cents. More clear, beautiful pork we never saw, and the only objection we could conceive to it, was the almost total absence of *lean.* Such pork is worth nearly the price of butter for food, and it might be tried into lard, with but little waste. The pigs were half or three-fourths Berkshire, and the remainder Leicestershire.

DECEMBER NOTES FROM BUFFALO TO NEW YORK.

As to the forms of Mr. Prentice's cows, we neglected to make any notes at the time, but the general impression left upon our minds is, that they are good. But here we prefer, when we have engravings, to let the animals speak for themselves, and therefore introduce Moss Rose, imported from England, October 1841, as a fair specimen of the sisterhood

Short-horn Cow Moss Rose, Imported.—(Fig. 37.)


T.K.VANZANDT.

The property of E. P. Prentice, Esq., Mount Hope, N. Y.

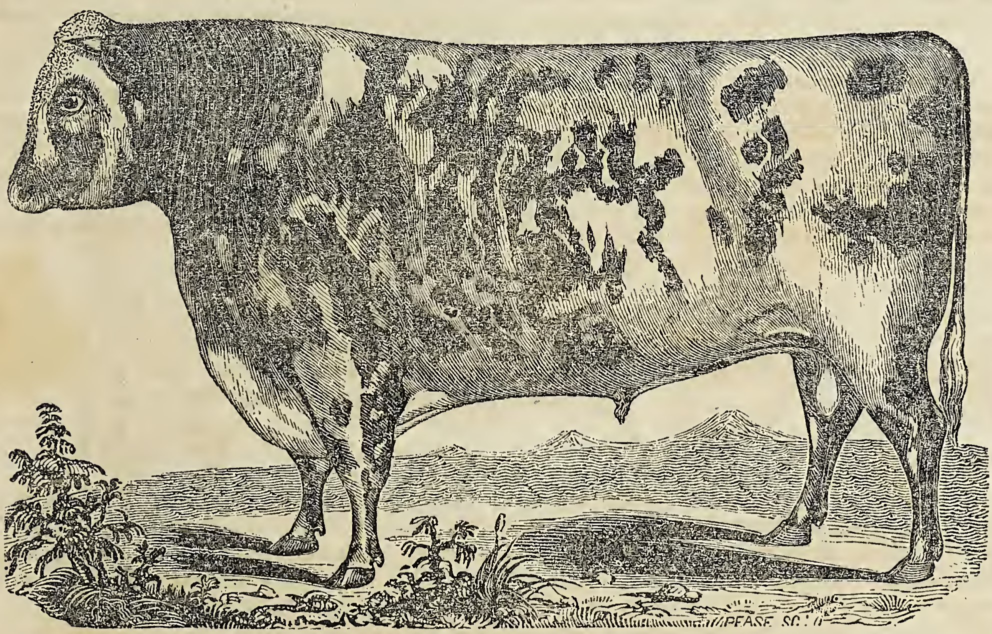
In the milking qualities of this fine herd, we took care to be more particular, and here several of them are great; Mr. Prentice having determined from the commencement of his breeding, to make deep milkers an essential point in his stock, and he was at the pains when lately in England, to select these himself for importation.

However much breeders may differ in regard to the points in an animal which denote great milking qualities, so far as our knowledge extends, this one thing seems to be settled, viz: they must have large udder veins. In handling these, in some of the cows we found them more than half as large as our wrist, and they also gave other indications of possessing the power of concocting large quantities of milk from their food. When in good grass pasture, Appolonia has given 26 to 30 quarts per day; Splendor, 2 quarts less; Susan, 28 to 31 quarts; and several other cows of this stock are nearly as good milkers; but as Mr. Prentice has not had it accurately measured, he does not wish to state an opinion as to the quantity, it is however, his intention to have them all measured during a definite time next summer, and ascertain also the quantity of butter made from it, and we trust that we shall be favored by his report when completed. We like to see the rule, the measure, and the scale applied in every instance that it is possible; for these are the only true test, and to these alone we look for our standard of information.

Mr. Prentice's stock is kept in fine order on precisely the same food as other farmers keep their cattle—hay and straw; and we understood him to say, that some of the in-calf heifers were not then stabled, but kept in yards with sheds open on one side to retreat to when they chose; and he contends that they are the poor rather than the wealthy man's stock, inasmuch as they give more milk and beef for the food consumed, than can ever be realized from a herd of natives. His herd consists now of about forty in all, and to any one desirous of purchasing, we can only say they will find here a good selection at fair prices.

We give another bull of Mr. Prentice's breeding before concluding this article, in consequence of seeing him on board Steamboat last summer on his way to Ohio.

SHORT-HORN BULL LEOPARD.—(FIG. 38.)



The Property of E. P. Prentice, Esq., Mount Hope, N. Y.

He was sold to Mr. Sandford Howard, of Zanesville, and took the first premium at the Fair held there last fall. Mr. Prentice has also sold stock into Massachusetts and elsewhere, which we understand is much liked. We shall probably come across them in our future rambles, and if so, we shall then hope to transfer them and their doings, to some future number of this paper.

SILK IN OUR STATE PRISONS.

We learn from the Supplementary Report of the agent of the State Prison, at Auburn, that the manufacture of silk was commenced there in May 1841, by the introduction of a single throwing mill. Since this it has been gradually increasing, and there are now in the prison, twelve throwing mills, with sixty-four spindles each, twelve bobbing wheels, twelve stationary wire swifts, eight pairs of horizontal swifts, one drying rack, two quilling mills and apparatus, one set of reeling pins, ten 72 inch reels, twelve 44 inch reels, one band maker, a dye-house with kettles, &c., &c. The machinery is moved by steam power, and forty convicts are now employed in the business; and the returns for their labor show as great a profit as any other of the mechanical departments.

The sewing silk produced here is superior to anything imported, in strength, softness, and color. The agent has purchased from

May 1841, to February 1843, 1052 lbs. reeled silk, at a cost of $5,126, and 984 bushels cocoons, costing $3,290.

The above facts will show that the manufacture of silk is a promising business in this State, and when we consider that most of the convicts employed in it had no previous experience, that much of the machinery in use is bungling and imperfect; besides other disadvantages which we could mention; the only wonder is, that it has succeeded at all, and we think the agent, Mr. Polhemus, deserves much credit for introducing and carrying it on so successfully.

TO PREVENT MICE, GRUBS, AND INSECTS FROM HARBORING AROUND THE ROOTS OF FRUIT TREES IN WINTER.

Before the ground is frozen in the fall, scrape away the loose mould from the trunk and supply its place with lime and ashes—mice and moles will not come to disturb the bark and burrow among the roots, when so strongly protected with alkalies; and the insects and their larvæ will be effectually exterminated by the contact, and the tree and its fruits will be saved from their destructive ravages the following season. The value of this application as a manure for the tree will abundantly remunerate the trouble and expense.

MANAGEMENT OF CALVES.

Have as many calf bows made in winter as you expect to have calves in the spring; hickory is the best wood for these; split it out and whittle or shave it down to the size of a whip-stock, leave a knob on one end, and cut in a notch at the other end. The average length before bending, should be from 18 to 28 inches, according to size and age of the calf. The cap to go over the ends of the bow has a hole ¾ of an inch at one end, and a hole the same size 2 inches from the other end. An inch from this hole towards the end, bore a half-inch hole, and cut a mortice of half an inch from one to the other, so that when the bow is put into the three-quarter inch hole to the neck it springs back through to the end of the mortise and remains stationary until removed.

For ties we would recommend light trace chains, with a small ring at one end large enough for the bow to pass through, and a fixture at the other end to fasten it to the calf's trough or manger, with a swivel to keep the calf from twisting up the chain, which any common blacksmith can make and put in. These bows will last for many years as we can testify from our own experience, and can always be had ready whenever there is a new calf dropped. The advantages of tying up calves in a calf house until weaned, is to halter-break and make them perfectly tame and docile, so that they never forget it; it also accustoms them to eat at an early age. Hay, or new mown grass, roots, oats, shorts, or indian meal, are usually much cheaper food than milk, it can consequently be saved for family use by substituting these kinds of feed, and the calf be pushed forward with about the same rapidity. Water is essential once a day, notwithstanding the calf may have milk morning and evening. It is important to keep the calves out of the scorching sun and away from the tormenting flies and wood-ticks in summer; and from pelting storms and cold at other seasons of the year. By keeping them well bedded with straw and throwing it out under a cover, such as may be made cheaply from loose boards laid upon poles in crotches, and mixing muck, sods, or road scrapings with it, a good pile of rich manure may be made in a few months from this source alone.

FARMERS SHOULD NEVER RUN IN DEBT.

As a *general rule* they should not incur any debt. The *exceptions*, they will be ready enough to find out themselves, and we leave them to their own ingenuity, and content ourselves with giving *three* reasons for the rule:—

1st. *There is a want of economy in the practice.* No man can afford to sell as cheap for credit as cash, for besides the insecurity that attaches to all claims, against even the best man, the trouble and expense of keeping accounts, and collecting debts, are an additional charge on the article purchased, which the seller is sure to estimate in settling the price of his property.

2d. *It begets habits of extravagance.* When a person has property under his exclusive control, which according to the customary usage of the world, is called his, however much he may be indebted for it, he is insensibly led to act with it, as if he were under no obligation to use any exertion for providing the means of repayment.

3d. *It is attended with great risk.* An honest reasonable debt in the estimation of a high-minded, honorable man, is a mortgage not only on the property he already possesses, but on all he ever expects to own, as well as his future exertions in life. How inconsiderate then, for one who already has something he can call his own, to incur an obligation, which sickness, misfortunes, or unlooked for changes, may place it out of his power to meet; subjecting his other property to the risk of loss for the payment of this, and perhaps leaving him, after all is gone, a prey to remediless anxiety and care.

SAVE YOUR DEER BONES.

We were in a shoe shop a day or two since, and noticed a large, gracefully-shaped bone, as clear, smooth, and dense almost as ivory, which was used for wedging out shoes when on the last; on inquiring we found it was from the lower hind leg-bone of a deer. This is split from the pastern joint, which forms the knob or handle, as far up as required towards the gambril joint, and the upper end is dressed down, and this small article made in an hour, from what is usually thrown away as useless, is worth from 25 to 50 cents, and as each leg furnishes two, the hind legs of a deer are worth from 1 to $2 eash. We believe *all* the leg bones are valuable, though perhaps not equally so. The horns are always in demand. The aggregate of such savings may add thousands to the wealth of the country, and greatly to its comforts.

Improved Culture of Cotton.

Under this head Dr. N. B. Cloud of Alabama, is writing a series of articles for the Albany Cultivator, detailing what he terms an improved system of cultivating cotton. By this he says he obtained a crop of 5,989 lbs. to the acre, and thinks it possible he may be able eventually to double even this enormous yield. His system may be stated in a few words.

1st. To let the land lie in fallow the year previous to planting.

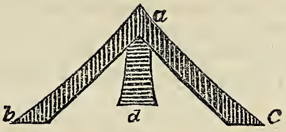
2. To manure as highly as four to five hundred bushels of rich compost to the acre, and this manure he contends may be made upon every plantation, at a cost of not over two cents per bushel, by keeping stock and saving all litter, and mixing with it plenty of muck or marl, according to the most approved Northern methods.

3d. In preparing his land, he first runs off his rows with a scooter plow three feet apart, and then cross-plows these five feet apart with a shovel plow, planting the seed at every cross of the furrows, and thus gets 2,940 hills on each acre.

4th. He uses *improved* seed, which previous to planting, he rolls in leeched ashes or sand, or in a compound of two parts of ashes to one of common salt, made moist with water, and then drops eight to ten in each hill, and covers with a light hoe.

5th. Soon after coming up he runs scooter and shovel plows down the rows. The hoe hands subsequently follow and thin out the cotton to two good stalks in each hill. By this method bar-shearing, scraping, and chopping out are saved, and the after culture is done by a kind of horse-hoe called a sweep.

Fig. 39.



This instrument is thus described:—

"It is easily made by any blacksmith, by laying the wings *a b* and *a c* upon the point of a scooter *d* in the form of an isoseles triangle, which is fastened upon the chip of a shovel plow stock, by a heel pin, in the same manner you would a shovel. From the tip of the wing *b* to that of *c*, it should be 2 feet, forming a kind of *horse-hoe*, by which a row is swept out at three furrows, This should be so curved and graduated upon the stock as not to go into the soil deeper than 1 inch, and as much less as possible, to enable it to cut the young grass and weeds that may be springing up. The great and singular advantages of the sweep over all instruments of the plow, harrow, or hoe kind that I have ever used, are these—that it will *kill* a greater quantity of grass and weeds in a given time, and *do less injury to the surface roots* of the plant, *so essential* to its *progressive* prosperity. The hoe hands following this instrument, thin the cotton to a stand, *one stalk* in a place, and draw up a small quantity of soil to the standing plant."

We are unable to speak as to the probability of obtaining as large crops as Dr. Cloud's on the average of soils in Alabama, although from the description he gives of his land—"forked leaf, black-jack, pine barren, a deep, porous, sandy superstratum, lying upon a tolerably good clay, at a distance of 2 to 3 feet below the surface;" one might infer that it was anything but rich. We can only add, that instead of a naked fallow, we should prefer a rotation of two years in grass with stock to feed it off; and then one or two years as the land would bear it, of cotton cropping. Sheep would be the best and most profitable stock for the southern planters. We calculate here that the increase of the flock nearly pays all expenses, so that the wool is clear gain, after deducting the interest on first cost of the animals. What then would be the profit of growing wool at the south, where the animals will get a good living in the open fields throughout the year? Choice Merino wool clean washed is now worth in this market 30 cents per lb., could it not be produced at the south for 15 cents?

If so, after deducting all charges of marketing, it would leave the planter a handsome profit. No sort of stock will renovate lands so cheaply and quickly as sheep.

Report of the Committee on Stock at the N. Y. S. Ag. Soc., Meeting, Sept. 1842, of Classes V., VI., VII. and VIII.

The Committee of the "N. Y. State Agricultural Society" on Cows, Heifers, and Heifer Calves, comprising classes V., VI., VII. and VIII., respectfully report:

That they have attended to the duties of their appointment, in which they experienced the embarrassment usual on such occasions, from finding the animals numerous, while the premiums were few,—but adopting the rule that a majority in number of the committee, should, of course, be decisive in all cases, they arrived at the following results.

In Class V., the Society's 1st premium was given to Mr. Sherwood's Durham Short-horn cow, *Stella*.
" " the 2d premium to Mr. Prentice's cow, *Daisy*.
" " the 3d premium to Major Dill's cow *Gazelle*.
" " the diploma to Mr. Sherwood's cow, *Pansy*.
In Class VI., the 1st premium to Major Dill's heifer, *Hebe*, (a capital animal.)
" " the 2d premium to Mr. Prentice's heifer, *Sally*.
" " the 3d premium to Mr. Prentice's heifer, *Caroline*.
In Class VII., the 1st premium to Mr. Sherwood's heifer, *Norna*.
" " the 2d premium to Mr. Prentice's heifer, *Charlotte*.

Your committee saw no other animal in this class, which they deemed, on the whole, worthy of being honored by the Society's diploma, which was accordingly withheld.

In Class VIII., the 1st premium was awarded to Mr. Prentice's heifer calf, *Nell*.
" " the 2d premium to Mr. Prentice's white heifer calf, *Duchess*, (by *Fairfax*.)
" " the diploma to Mr. George Vail's heifer calf, (got by his imported bull *Wellington*.)

Your Committee found it no easy matter to decide among so many *fat* calves as were shown in class VIII., their respective merits and faults being alike covered and hidden by flesh, so much so, that they were really better adapted for the inspection of a committee of *butchers* than of breeders. The practice, now too common, of *fattening* breeding animals for exhibition, is not only wholly without utility, but is so bad and injurious in every point of view, that it ought to be discountenanced.

It will not fail to be noticed that *all* the foregoing premiums are given to animals of the valuable breed known as "Durham short-horns," against which kind there was, on this occasion, no other breed shown in competition, except Herefords, of which there was a beautiful and very creditable exhibition, consisting of a portion of the herd of Messrs. Corning and Sotham, some individuals of which, this committee would highly commend, especially as being good specimens of that important quality *good handling*, always essential to excellence.

Your Committee, (of which a portion, if not a majority, is composed of what might be called Short-horn men, either by preference or by interest, as Short-horn breeders,) from motives of delicacy, not to say generosity, did not deem themselves called on to decide between these two rival breeds, and against the Herefords, which would have been for the most part and in effect, their decision, if made on this occasion. In England, the home of both breeds, where *beef* is the *first* and almost the ruling consideration, the Herefords, as a breed, it is well known, have long maintained a sharp and often successful competition with the Short-horns, for *feeding* purposes, especially as a *grazing* stock; while it is claimed, and now generally conceded, by well-informed, dispassionate persons in England, that the *well-bred* Short-horns have the merit of earlier maturity, and are also entitled to the preference for stall-feeding, and more especially and decidedly so, for dairy purposes, in which the Short-horns and their crosses are believed to excel all other breeds, and that the pure bred males of this breed are capable of improving all other breeds of cattle; certainly a most important consideration, and especially so in this and all the northern portion of the United States. It is understood that the Herefords have not yet been sufficiently tried in this country, as milkers, in the absence of which there seems to prevail at present an unfavorable impression of them as dairy stock; which impression, it is to be hoped, may soon be done away, if, as their friends claim, the Herefords are really a superior milking breed. Some of their *crosses* with native stock, now exhibiting in Massachusetts, descended from an importation of Herefords made many years since by Admiral Coffin, are understood to have proved excellent milkers. It is, besides, claimed for the Herefords, that they will make good working cattle, being strong and active, which is not doubted. It is also conceded that the quality of the Hereford beef is excellent. Therefore, taking no more than a fair view of their case, the Herefords must, in all probability, prove a highly valuable stock in those portions of this country where the *grazing* of cattle for *beef* is the primary object. Under these circumstances, your committee would ask, in behalf of the newly imported Herefords, a *fair chance*, and that they be allowed (after coming from on ship-board) to get well upon their feet, before they "enter the lists" against the now well-established Short-horns. If the Herefords are cherished and encouraged for a time, it is to be hoped that the now favorite Durhams may, by-and-by, in future competition, find in them "foemen worthy of their steel."

In view of the foregoing considerations, your committee would respectfully beg leave to recommend that extra premiums be awarded to the Herefords, as follows:

To Mr. Sotham's cow, Matchless, fifteen dollars.
" " " Martha, ten dollars.
And a diploma to his heifer Maria.

If the Herefords were distributed in more hands, so as to give room for competition among themselves, your committee would suggest the expediency of hereafter offering premiums for them, distinct from other breeds. Also for *North Devons*, a highly useful and most valuable breed, especially on light soils and in hilly districts of country.

Your committee cannot, in justice, close their report without remarking on the *great want of order* and good arrangement in the show-yard, of the classes of stock which they were called to examine, by which the loss of much time was caused to the committee, and their labor greatly and needlessly increased. The giving of so many classes, and of totally distinct breeds, to *one* and the *same* committee, (the show of animals in each class being numerous,) put more duty on this committee than they could thoroughly perform within the allotted time; added to which, they were annoyed and impeded in the execution of their task, by the crowd of spectators following and pressing on them during the examination of the animals,—and finally, considerable of the stock was *removed* before the committee could complete their duty of inspection and review, which fact must be taken in explanation of the omission to award the Society's diploma in Class VI. The want of information as to *how* the animals had been fed; also as to the *milking* qualities of the cows, and occasionally the *pedigree*, was much felt by the committee, who, in the absence of this needed information, were in many instances, left to grope their way in the dark, to a decision, of course in some cases not wholly satisfactory even to themselves. Nor did they find persons in attendance, to lead out the animals for a more full and careful examination, especially as to their style of carriage or movement, which, it is needless to remark, is, as well as form and handling, an essential element of any intelligent opinion or critical decision on their merits.

These difficulties and evils are worthy of attention and reform, and admit of an easy remedy in the future exhibitions of the Society. In the meantime they must serve as an explanation of the possible omission of your committee to notice, duly, some few of the animals shown.

All which is respectfully submitted.

David C. Collins,
J. S. Hitchcock,
W. K. Townsend, } *Committee.*
Charles Broom,
R. L. Allen.

Albany, Sept. 29, 1842.

Editor's Table.

NOTICES OF THE PRESS.

The New Genesee Farmer.—The January No. is at hand, which we find an enlarged quarto of 16 pages, neat type and paper, and well filled with matter, interesting and instructive to the agriculturist. It is published at Rochester, this State, by Crossman and Shepard, and edited by Henry Colman, Esq. The price has been raised from fifty cents to one dollar a year, and cheap enough it is too, at that. Indeed a dollar is so trifling a sum, that we are perfectly surprised that any one should desire an agricultural paper for less than this amount; for as certain as any justice is done to the work, the publishers must lose money at it.

Tennessee Agriculturist.—No. 1, for January, of the 4th vol. is now out. This has always been a favorite with us, as our communications formerly to its columns will testify. It is issued monthly, in 24 quarto pages, and its price is now reduced to One dollar a year, which will no doubt greatly increase its circulation at the south-west, and add to its usefulness. One of its editors, Mr. Fanning, proposes opening a school for twelve pupils, at his own residence, 5 miles from Nashville, where, to the usual branches of intellectual and moral culture, he will add stock-breeding and theoretical and practical agriculture. To attain these ends, a few hours each day will be spent in the garden and on the farm. These last branches are almost entirely a new feature in education in this country, and have hitherto been entirely overlooked; but we believe the day is not distant when a great public change will take place in regard to these matters, and that theoretical and practical agriculture, and stock breeding, will be among the *indispensible* departments of the higher classes of all good schools out of our large cities. We wish Mr. Fanning every success in this pioneer branch of education. His terms are moderate—$100 per annum—for instruction, board, and lodging.

The Northern Light, devoted to free discussion, and to the diffusion of useful knowledge, miscellaneous literature, and general intelligence, published monthly, at No. 20 Market street, Albany, 16 pages, quarto, price One dollar a year, edited by John A. Dix, and assisted by an association of gentlemen. We are just in receipt of the 9 Nos. of Vol. 2, of this excellent periodical. Its papers, generally, are of a high order, and as agriculture is among its themes, we commend it to the public. The price is so low that we think no one can refuse to subscribe.

The Farmers' Register, new series, Edited by Thomas S. Pleasants, and published monthly at Petersburg, Virginia, at Five Dollars a year in advance, 64 pages, double Royal Octavo columns. It will be seen by the above, that this sterling agricultural periodical has changed hands, and that Edmund Ruffin, Esq., its hitherto able and indefatigable editor, retires. We deeply regret this, but understand that Mr. Ruffin's services will not be lost to the agricultural community by this step, as the state of South Carolina has appointed him as their Agricultural Surveyor, an office that his talents and acquirements peculiarly fit him to fill ably and well. We have always entertained a very high opinion of Mr. Ruffin, ever since we read his "Essay on Calcareous Manures," a work of which it was remarked to us by a distinguished gentleman in Kentucky, "had staid emigration, in a great measure, from Virginia, and revolutionised its system of agriculture on the tide waters." This is high praise, yet we have no doubt it is justly merited.

We have had time to read but a few of the articles of the January No., issued by Mr. Pleasants, but those speak well of his ability in his new vocation. We tender him our best wishes of success.

The Albany Cultivator.—This valuable paper entered on its 10th Vol. in January, and the two first Nos. at hand are filled with its accustomed able, varied, and useful matter. The January No. has a fine large portrait on a distinct quarto sheet, of Mr. Prentice's Fairfax, for some account of whom, see our February No. The Cultivator has been so long and favorably known by the public, that it requires no praise of ours. Previous to commencing this paper, it was the one to which we were in the habit of contributing most. It is issued monthly at Albany, this State, in a large quarto form of 16 pages, and is embellished with numerous engravings, at One Dollar a year. Messrs Gaylord and Tucker, editors.

The Boston Cultivator.—Otis Brewer, publisher, 91 Washington street, a weekly folio, of 8 pages, devoted to agriculture and miscellaneous news, price Two Dollars a year, in advance. We are in receipt of the first Nos. of this excellent paper, for vol 5th, and think well of them, and not the less, perhaps, on account of the editor being an *enlightened* Durham man. He seems to have some fancy for choice animals, and each No. of his paper gives excellent portraits of them.

The Boston Traveler, in large newspaper form, is published semi-weekly at Four Dollars a year, in advance, by R. L. Porter & Co., 47 Court street. By the 6th No. at hand, we perceive that Mr. H. C. Merriam, the late spirited editor of the Cultivator, has become the presiding genius over the Traveler's columns. The Agricultural Meetings at the State House, are particularly well reported in the Traveler, and its contents otherwise are varied and interesting.

The Maine Farmer and Mechanics' Advocate, has entered upon its 2d vol., of a new series. This is in large newspaper form, and to agriculture and mechanics, it unites miscellaneous news. It is published weekly by William Noyes, at Two Dollars a year, payable in advance, Dr. E. Holmes, editor, and is one of the best and most spirited papers of the kind, with which we exchange.

The Southern Planter, published monthly at Richmond, Virginia, edited by C. T. Botts and L. M. Burfoot, at One Dollar a year, in advance, 24 pages double columns, Royal octavo, embellished with engravings. This excellent paper with its handsome cover, is got up in rather neater style than any other agricultural publication at the south, and we are glad to see it entering upon its 3d vol. with so much success. We should suppose its price would ensure it a large circulation, but in addition to this, it is well filled with good practical original and selected matter.

Another Southern Planter is just started at Augusta, Georgia, at the same price as the above, but we understand that the editors did not know that the Old Virginian had taken the field before them, or they would not have come in thus unceremoniously for his cognomen. It is the intention of Messrs. Jones to change the name in the 2d No. which, when we receive, we shall announce in due form. We don't know but Messrs. Botts and Burfoot will begin to suspect that there is a conspiracy on foot to drive them off the field, since this is the second time that their name is assumed. It is doubtless somewhat provoking, but we could not resist a smile, when we first *unbagged* this third Dromio. We hope all new comers will be kind enough to let *us* alone.

Central New York Farmer.—The 2d vol. of this paper comes out in an enlarged size, having assumed the quarto form. It is a monthly of 16 pages, embellished with engravings, published at Rome, this state, at Fifty Cents a year, and is edited by Messrs. Johnston & Comstock. This paper is eminently practical, and calculated to do great good among our farmers. We have but one objection to it, and that is the price, it ought to be as high as One Dollar, to afford its proprietor a fair remuneration. We know, however, that there are many who will take a fifty cent paper, who who would not subscribe for a dollar one, and perhaps it is no more than right that the views of such persons should be met, if they can be consistently.

The British American Cultivator.—This also has entered upon its 2d vol., is a quarto of 16 pages, published monthly, by W. G. Edmunson, at Toronto, Upper Canada, at One Dollar a year, edited by Wm. Evans, and a capital periodical it is too, and of a high tone, and well calculated to improve the farming community where it is published. We hope that every emigrant who comes into that fine province, will be a subscriber to the Cultivator, for a most excellent manual he will find it, in a land whose crops, and climate, and system of agriculture, are so different from that of Great Britain.

The Colonial Farmer.—This is an octavo with wide double columns of 8 pages, published monthly, by R. Nugent, at Halifax, Nova Scotia, at Five Shillings a year, and is edited by Titus Smith. We are in receipt of No. 1, of the 2d vol. of the Farmer, and we perceive that it is pushing ahead in the true spirit. Its original and selected matter is capital.

Our readers will perceive by the above notices, that the agricultural periodicals of the country are determined to persevere in their praiseworthy efforts to exalt and instruct the farming community, and it will be a burning shame if they are not well supported. If one-hundredth part of the money now spent in rabid politics and sentimental nonsense, which injure and debase the mind rather than do it any good, was turned to the support of agriculture, it would prove a great blessing to our country. The above are such papers only as have commenced or continued their career since January. All new volumes or new papers for the ensuing year, will be noticed by us in the same full and liberal manner as fast as commenced, and may they all live and flourish—enlighten and instruct that worthy class of people, for which they are especially designed.

A Popular Treatise on Vegetable Physiology, published under the auspices of the Society for the Promotion of Popular Instruction, with numerous cuts, 301 pages, octavo. From the cursory perusal given to this, we think it all its title indicates, and the best work for the general reader on the subject of Vegetable Physiology, that we have yet met, and as such, we recommend it to the public.

A Popular Treatise on Agricultural Chemistry, intended for the use of the practical farmer, by Charles Squarry, 154 pages, octavo. We have shown our opinion of this work, by frequently quoting from it in the back numbers of this paper, and it may be sufficient for us to add here, that we think it one of the most valuable re-publications from the English press lately issued. It has the merit also, of being written in as plain and familiar a style as it is possible to treat such subjects. The two works above are published by Lea & Blanchard, Philadelphia.

The Bible in Spain, by the Rev. George Borrow.—We are greatly mistaken if this work does not have a large sale, for it is the most original, picturesque, and deeply absorbing book of travels which we have read for many years. We had marked some extracts on Spanish stock and agriculture for insertion, but they are crowded out for want of space. We are favored by two editions of this work. One beautifully got up, of 232 pages, Royal octavo, double columns, price Fifty Cents, by Saxton & Miles, 205 Broadway; and another of 110 pages, by J. Winchester, 30 Ann street, in form of an extra New World, price Twenty-five Cents. The public must be fastidious not to be well suited with either of these handsome editions of the popular Mr. Borrow.

EUROPEAN AGRICULTURAL TOUR AND SURVEY.

Several gentlemen interested in the advancement of agricultural science and improvement, and of rural education, have proposed to Mr. Henry Colman, late Commissioner of Agricultural Survey of Massachusetts, to visit Europe for these objects. The plan is for him to spend a year in England, in the examination of the Husbandry and Rural Economy of that country; and a year on the continent, in the examination of French, Flemish, Swiss, and German Husbandry, and especially the Agricultural or Manual Labor Schools and the Experimental Farms.

It is thought that such an examination, as yet never undertaken by an American, might, if well conducted, essentially conduce to the advancement of agricultural knowledge and improvement in this country, and especially serve the cause of rural and practical education, which is now exciting great interest throughout the United States. The general plan of the survey will conform to Mr. Colman's Survey of the Agriculture of Massachusetts.

It is proposed to publish his reports in successive numbers. The first number is expected to appear by the 1st of January, 1844, and sooner if practicable. The rest of the numbers will follow in convenient succession, at intervals of two or three months.

The whole work will be comprised in eight, or at most ten numbers, of at least 100 pages each, handsomely printed in an octavo form, stitched and covered, and embellished with all necessary and useful drawings and engravings, title pages and index.

The cost will be 50 cents each number to subscribers. Gentlemen who subscribe are understood as subscribing for the whole work.

As the enterprise involves of necessity a large expense, it is expected that one dollar per copy will be paid on subscribing; or otherwise, one dollar on the delivery of the first number; one on the delivery of the second number; one on the delivery of the fifth number; one on the delivery of the seventh number; and one on the delivery of the ninth number, should the work be extended to ten numbers.

☞ The subscriber has already the promise from many friends, of letters of introduction to their friends in England or on the Continent; and he begs leave to say, that he shall feel himself particularly honored and obliged by any letters of introduction to any gentleman who would welcome his mission or in any way assist its objects, or otherwise render him any office of civility or kindness. His objects being wholly public, he will anxiously avail himself of every advantage and facility of intercourse and observation with intelligent and respectable persons abroad.

Henry Colman.

Rochester, January 2, 1843.

Agricultural Societies.

Annual Fair of the Planter's Club at Hancock.—We observe, from the Georgia Journal, that this spirited society held its annual meeting at Sparta, on the 4th of Nov. The first articles exhibited for premiums were by the ladies, more than twenty of whom we find among the competitors. Mr. Thomas Neal took the first premium on horses, and Col. John Bonner received those on swine, and a Durham bull. The first prize boar was Rip Vanwinkle, bred by Mr. C. N. Bement, of Albany, and the same that took the first premium at our own State show at Syracuse, Sept., 1841. The first prize for sows was divided between Nonsuch, bred by Mr. Bement, and the Flower of Orange, bred by Messrs. A. & G. Brentnall, of Orange co., this State. Mr. Grimes took the first premium on Durham cows, and Capt. R. S. Hardwick on South Down sheep. These were purchased of Mr. Bement. The address was by Judge Garnett Andrews, and is one of the best we have read this season. We make two extracts, one upon the utility of "book farming," and another on the advantages of agricultural associations.

"For my own part, I have accidentally picked up some scraps of book farming, which have been as useful as any other knowledge acquired from the same source, with so little trouble. By this means I learned that the sap *ascended in the wood,* became elaborated in the leaves and *descended in the bark* of the tree. This knowledge enabled me to correct some very fatal errors in budding fruit trees. It explains to us why corn is so seriously injured by topping before entirely ripe. Until I received the knowledge from books, *I had lost one half the good effect of my manure* by keeping it off the field until *after it had fermented or rotted,* according to the *advice of old practical farmers* who held in *contempt all book farming.*

"I think our club is taking one step towards this consummation, so devoutly to be wished. Its tendency is to give our citizens some other excitement, some other pleasure, more substantial, rational, and patriotic, than have ever been accorded to political ambition. The time is coming, nay, now is, when the names of such men as Sir John Sinclair, Sprengel, Arthur Young, Chaptal, Leibeg, Buel, and Garnett, shall stand above those of warriors and statesmen. Thousands yet unborn shall rise up and call them blessed. We look, and well may we look, to our husbandmen for the cultivation of a high moral sense, whose fruits shall redound to the honor and glory of our country. We are, perhaps, nine-tenths of the population, and what we *will* we *can* do. How vast then the responsibility that we *will* correctly!"

Geological Survey.—We see that the lower House in Arkansas, has passed a bill authorizing a geological survey of the State. We trust that it will become a law, for nothing can be more beneficial to our country than such surveys; and they have never failed, we believe, in discovering treasures before unknown or scarcely dreamed of.

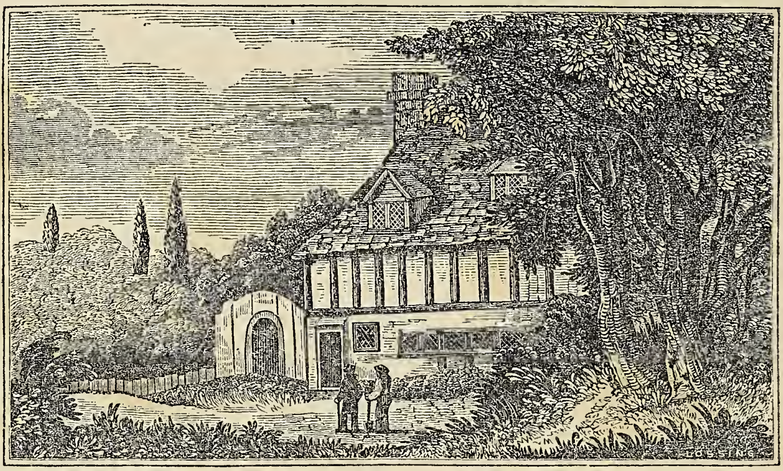
Superior Seedling Grape.—The Worcester Spy says, that a gentleman in the vicinity has raised a new seedling grape, probably a hybrid between the Sweet-water and Isabella. Its qualities resemble the Sweet-water, being tender, sweet, and juicy, without any hard pulp about the seeds. It is a good bearer, and stands the climate of Massachusetts well. Its fruit ripened six weeks earlier than the Isabella, and continued on the vines till November. We should be obliged to the editor of the Spy if he could procure us some cuttings.

RURAL ARCHITECTURE.

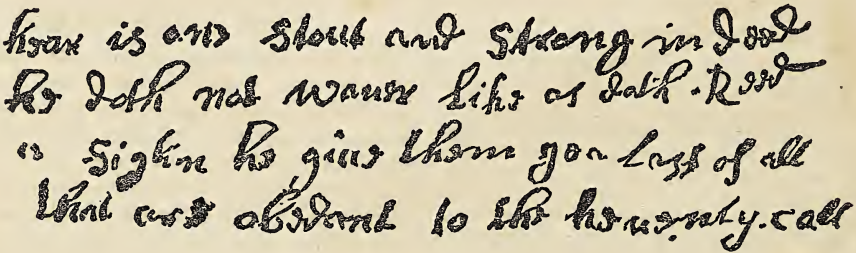
We are rejoiced to see in the vicinity of this city, and especially upon the banks of the Hudson river, that a new style of architecture within the past few years has been gradually coming into vogue. Our citizens and farmers are just beginning to learn, that shingle palaces, and Greek temples in wood, with pillars like a crane's legs, supporting a portico something like the head of a huge catipult, are neither comfortable nor in good taste; and now they are looking about a little, to ascertain what they can substitute for them. For our own part, we know nothing equal to Eenglish cottages, in the Gothic, Tudor, and Orné styles. There is something so quiet and home-like—so rural and varied—so picturesque and truly comfortable in them, that it has been a perfect wonder, considering our English origin, that they have not taken precedence in American architecture, from the first settlement of the country. Yet instead of this, they have been almost entirely rejected, and the smart Jonathan, when he became of age and set up for himself, would have none of what he termed the "homeliness of his sire," and sought out other inventions more consonant to his ambitious fancy for display. But he has got older now, and as he begins to rejoice in the more sedate appellation of Uncle Sam, we think he is growing wiser, and caring less for tinsel and show, and more for an appropriate fitness of things and substantial comfort.

It is our purpose hereafter, to give sketches occasionally in this work, of such buildings as we think most appropriate for the farmer, and as an example of one of the more humble kind, we here introduce the cottage of Elstow, where the celebrated author of Pilgrim's Progress, John Bunyan, was born, and to add to the interest of the engraving, we subjoin a fac simile of his hand writing and signature.

Cottage of John Bunyan.—(Fig. 40.)



Chirography of John Bunyan.



hear is one stout and strong in deed
he doth not want life or doth Reed
is sighin he gives them yea last of all
that are obedient to the heavenly call

Autograph of John Bunyan.

JOHN : BVNYAN

For these rare engravings we are indebted to the same gentleman, the Rev. J. O. Choules, who furnished us with the curious work of Barnabe Googe, Esq., whom we took the liberty of introducing to our readers in the October and November Nos. of our paper, and we declare, had we not been informed, that this cottage was Bunyan's, we should have set it down at once as the home of the author of the "Foore Bookes of Husbandrie." For see what a sequestered retreat it is, and how charmingly embowered in trees. These are the places to talk upon farming, and we will venture to say, that had not an odious tyranny dragged Bunyan away from this ancient spot, instead of writing a "Pilgrim's Progress," he would have given us a work almost as immortal on Husbandry; for how often rural subjects and images abound in this singular production. We hear talk of flocks and herds, gardens and flowers, fields of wheat and corn, ground well sowed and tilled, muck and manure; and as we wander on we are carried over By-path meadow, cross the valley of Humiliation, wade through the slough of Despond, rest in an arbor on the hill of Difficulty, and after the still more fatiguing ascent of the Delectable Mountains, are regaled in orchards and vineyards, and sip at the coolest and most delightful of fountains. Yes, we repeat, if John Bunyan had not been a preacher and author, he certainly must have become a farmer.

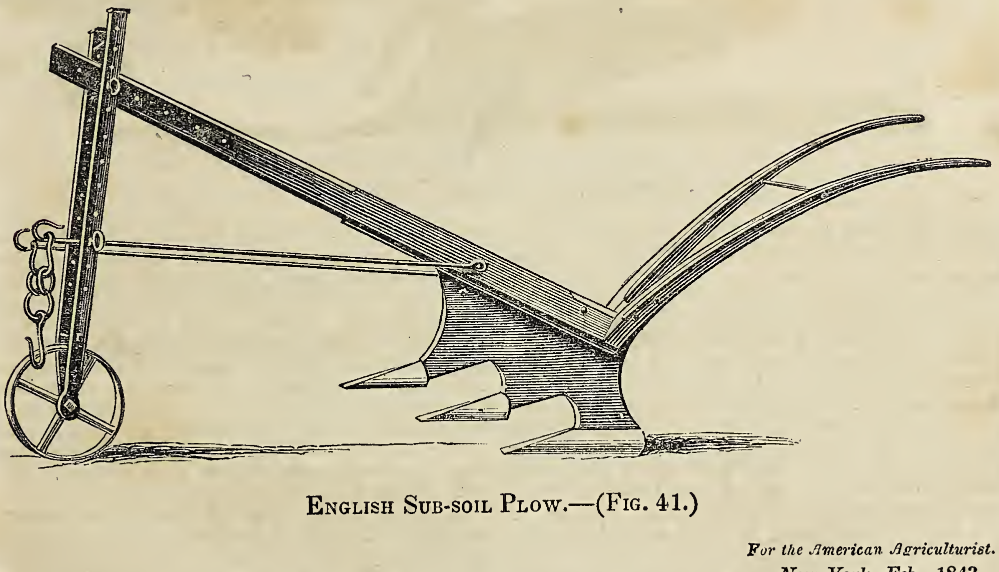
Original Correspondence.

SUB-SOIL PLOWS.

BARNABY AND MOOER'S SIDE-HILL PLOWS.

When we were in England we devoted some time to the examination of sub-soil plows, but all we saw there we thought entirely too expensive, and so heavy that it required from three to four pair of strong horses to move them. This we knew would never answer with American farmers, and since our return we have suggested several models to our mechanics, but have never been able to get anything promising to combine cheapness, strength, and good work so effectually, as the sketch which Mr. Cornell was so obliging as to make for us one day as he called at our office, on his way south from Ithica.

As to Barnaby and Mooer's side-hill plows, we agree with Mr. Cornell in saying that it is the very best known for this purpose, and we have seen it do excellent work on level land. We are of opinion that it will answer an admirable purpose in the washy lands of the south, especially in what they call "*horizontal*" plowing, and we have sent several out to our friends there for trial, and if they prove successful, we have no doubt that they will soon be more generally used in that quarter than any other. But before introducing Mr. Cornell's letter, we give the engraving of one of the best kinds of English sub-soil plows that we know of. We copy it from the London New Farmers' Journal, of December, and believe it is a recent invention. Its construction is so easily made out from the engraving, that we give no explanation of its different parts. In some soils we should think this plow would work well.



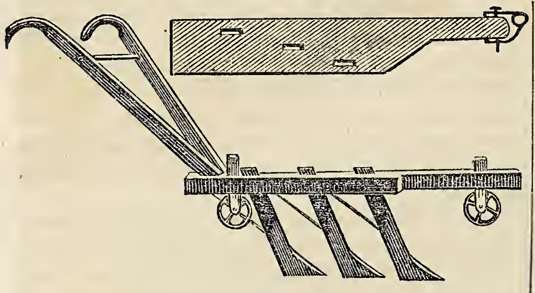
ENGLISH SUB-SOIL PLOW.—(FIG. 41.)

For the American Agriculturist.

New York, Feb., 1843.

MESSRS. A. B. & R. L. ALLEN:

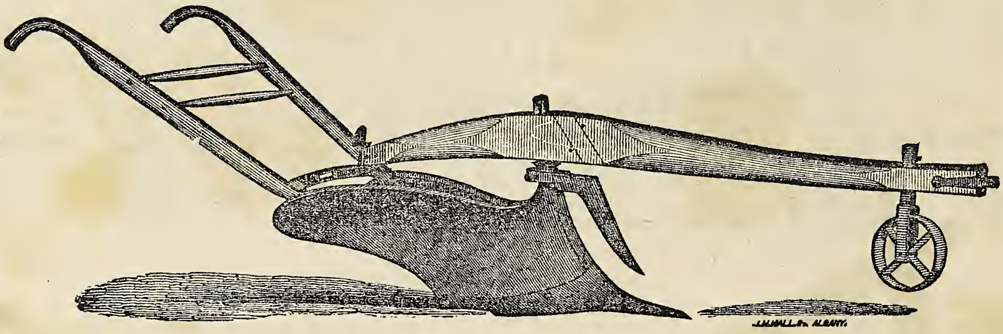
Having become satisfied of the utility of sub-soil plowing, and equally well satisfied that the heavy, ungainly English plow, hitherto introduced into this country, is not well adapted for the purposes of the American farmers, I herewith give you a rough sketch of a sub-soil plow, that I think will perform the office of loosening the sub-soil in a better manner than any with which I am acquainted. It consists of three coulters set in a beam, one 12 inches in advance of the other, and varying 4 inches from a right line, as is seen by the mortices in the top view of the beam, in the sketch.



Sub-soil Plow.—(Fig. 42.)

It will work best to follow in the furrow of the common plow, cutting a 12 inch furrow. It may be guaged to a suitable depth by raising or lowering the wheel. The clevis should be so arranged that the line of draught will be in line with the left side of the beam, which will allow the plow to keep its place in the furrow, when the team follows the furrow of the surface soil plow. The manner in which the coulters are set, will prevent clogging, and assist in the performance of the work, as each coulter has a slice of 4 inches only to pare off or loosen, in most soils. One pair of horses would be team enough to plow 6 or 8 inches deep, with the above plow. If you have one team with the surface soil plow working 7 inches deep, and one on the sub-soil plow working 8 inches, this would stir the ground to the depth of 15 inches. Where it is desirable to go deeper, I would plow 8, 9, or 10 inches deep with the surface soil plow, and the same depth with the sub-soil plow.

The coulters are made of wrought iron, with steel points, and when they become dull they can be taken out and sharpened by any blacksmith that can shoe a horse. The price of a sub-soil plow, with three teeth, as above, would be about $10, one with four teeth, $12. While on the subject of Plows, permit me to describe some of the peculiarities of Barnaby and Mooer's Plow, and explain the difficulties that attend its introduction among the farmers as a level land plow; it is conceded by all to be the best side hill plow ever invented, they are as follows:



Barnaby and Mooer's Side Hill Plow.—(Fig. 43.)

The plow having two mould boards, so arranged as to act as a right or left hand plow, it necessarily follows, that one mould board must perform the office of a land side, while the other acts as a mould board. Either mouldboard is so constructed that a line drawn through any part of it, parallel to the surface of the earth, is straight; when the beam, therefore, is thrown over to the left hand side of the plow, it forms a land side of the left hand mould board, and a line drawn parallel to the earth through the said land side, at any point as deep as it goes in the ground, say from one to two inches is a straight line, and parallel with the beam of the plow, and in line with the furrow. But a line drawn at right angles with the above line, or perpendicular with the earth through the mould board would be a curved line; consequently the land side of this plow is left round on the land edge of the furrow, instead of square and perpendicular, as is the case on the land side of the common plow, and hence arises the difficulty that some have complained of in holding this plow on level land. The difficulty is in the plowman, and not in the plow. The plowman strives to hold the plow upright, as he is used to do with the common plow, whereas, its peculiar shape inclines to cant a little to the left hand, when it throws the furrow to the right hand, and to the right hand when it throws the furrow to the left hand. If the plow is suffered to run in a natural position, it will be found to be an easy plow to manage. In fact I have known it to run 40 rods without holding or touching, turning a handsome furrow the whole distance. On a side hill there is less inclination to cant over, as the land side of the field is the highest, and the furrow rolls from the plow with less resistance. Another difficulty has been in putting the plow in the hands of the farmer without being scoured, in which case it is not surprising that, after trying the plow, he should condemn it, and throw it aside before the sand coat is worn off the castings. That difficulty should be removed by the manufacturer in grinding the castings before they leave the shop. The above difficulties have essentially retarded the introduction of the plow, but I am satisfied, from a practical acquaintance with the best plows in use, that no plow has yet been invented that can compete with this for any length of time, as a plow for general use. Its ease of draught and its adaptation to every kind and shape of plowing, and the perfect manner in which it performs its work, are advantages that cannot be combined in any other plow.

Yours, &c.

E. Cornell.

For the American Agriculturist.

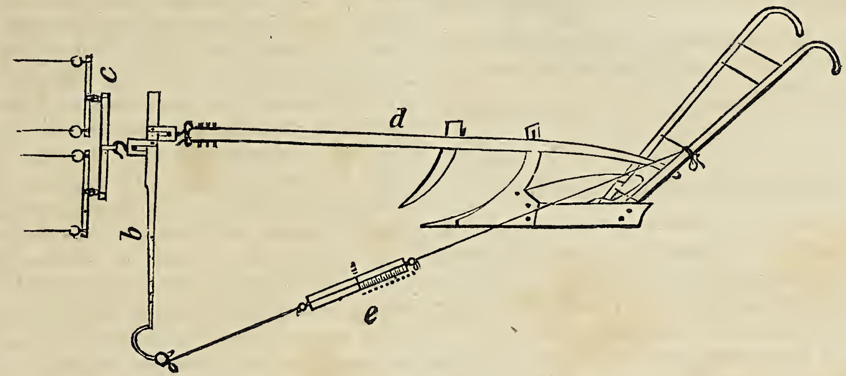
CONE'S DYNAMOMETER.

BATAVIA, Jan. 24, 1843.

MESSRS. A. B. & R. L. ALLEN :—

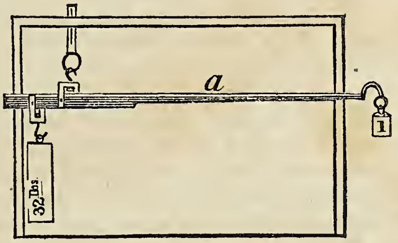
I acknowledge the receipt of the January No. of the *American Agriculturist*, in which you have pleased to notice an invention of mine, in a Dynamometer, through my friend T. C. Peters, whose name is familiar among the agricultural community; and as he has omitted some of the minutiæ attending it, I send enclosed a drawing, which has the explanation on its margin, which cannot but be perfectly clear to you.

FIG 28.



EXPLANATION.

Let *a* be Dynamometer Beam, with 32 lbs. on weighing hook, and one lb. weight at the end of beam, which exactly balance each other; then hitch beam to plow, which call *b*; then draw *e* versus *c*, so as to draw plow *d* along, the force draws out index to spiral balance to 7 lbs., which multiplied by 32=224, the force exerted to draw plow, except 7 lbs., which +224=231 lbs., as you see the cord hitched to end of beam draws 7 lbs., which is plain, and proves the problem, Q. E. D.



You will see that Mr. Peters omitted to mention, and to add in the force exerted on the small scale, which is a trifling omission; but when mathematicians come to examine a *sum*, it must *prove*. Thus, for example: When plowing beam *b*, draws out spiral balance index to 7 lbs., the 7 × 32=224, this, according to former statements, would be the draft of the Plow; but then what shall we do with the force that draws out the Index ? Why, of course, add that, which is 7 lbs., to 224, and the aggregate would be 231 lbs., which is exact, and reduced to a mathematical fact, which can in no case be gainsayed. Or, should the force exerted draw out Index to 16 lbs., then multiply 16 by 32=512 lbs., to which also add 16, makes 528 lbs., the force exerted, which you will discover at once as being correct and simple.

It is a notorious fact, that even the plows now in use in this favored section of the world, where nearly all plow for a living, there is a difference in the ease of draft from 20 even to 100 per cent.; and yet we have a large number of seemingly intelligent farmers, who now actually sneer at such inventions, saying, "they want no book-farming, and that they can tell when a plow suits them better than any one else." Such men I am willing should tread in the footsteps of their great great, great, grandfathers, if they choose; but if I am to plow for a living, I am willing to use a plow that will draw as easy with one horse, as some others in use will with two. Yet, after all, the march of agricultural improvement is onward; and when farmers come to see science and practice combined, and thousands upon thousands have seen and are seeing this, they then heartily appreciate anything that tends towards advancement in their cause, and become co-workers therein.

Mr. Peters suggests the idea, that the Dynamometer should stand and work perpendicularly, to which I must most respectfully beg leave to dissent, for the following reasons:

When plowing, the plowman should have nothing to impede his view of his horses, so that he can keep his plow perpendicular, and his horses horizontally straight, so that the plow shall work even, and cut the same furrow slice. It is a great objection to all Dynamometers I have ever seen, being hitched immediately behind the team; for the inspectors are then obliged to be trotting along immediately under the horses tails, and are consequently always more or less apt to err in their observations, from this and various other reasons. Again. Should my Dynamometer work perpendicularly, you would have to be right over the beam of the plow, and in front of the plowman. It may be said that the plowman might make the observations; but this should not be, as it requires all his skill to keep the plow and team as direct as possible. Whereas, on the other hand, when the beam comes out on the land side, you have all the chance to note oscillations, and come to a correct conclusion, as you are entirely out of the way of plowman and team, and have a good chance for walking without any impediments. There is no difficulty to be apprehended from the beam coming to the ground, for the moment you start your team, you may place your Dynamometer beam in such position as you please, and it will keep that position without any trouble.

In your remarks upon the State Fair, I coincide with you, except in relation to the time of holding that Fair. Would it not be better to have the Fair come about the 10th or 15th of September? Then the farmers of Western New-York are more at leisure than in the first week of that month, for you know they must attend to getting their wheat in at any rate, as that is all that can be grown in our section of the country, to raise cash; and nearly all the wheat sowed in western New York is sown in the first week of September.

I am making preparations to have my improvement uniform throughout the union, and an exclusive property in the same.

I am cordially yours, THE INVENTOR.

For the American Agriculturist.

SHEEP HUSBANDRY, NO. 1.

MESSRS. A. B. & R. L. ALLEN:—

DEAR SIRS:—From the commencement of your publication, I have watched its development and progress, not only with great interest, but also with much gratification. I have been especially gratified by seeing the National character of your work; for it has been *American* in fact as well as in *name*. This, one of its chief characteristics, I hope will be continued; for though we had before no lack of agricultural periodicals of a local character, good and highly useful ones too, yet we needed at least one publication at some central point, of a somewhat different order; one which should be comprehensive and national in its scope, and as broad in its views as the whole of our extensive and growing country.

I well know that there were those, who objected to and and decried the attempt to establish your work on such a foundation, and who thought its chance of success would be diminished by aiming at anything beyond the usual local character, of the hitherto most successful agricultural newspapers and magazines of the United States, but I trust you will live to demonstrate the fallacy of such narrow views. Allow me to offer my congratulations on the progress you have already made, and in the name of many of your readers and friends, to wish you the best success in a long career of extended usefulness.

It has struck me, that giving your publication a National aspect, your very location at a commanding point of the North, would enable you, in many respects, to be still more highly useful to the Southern and Southwestern portions of our country, than if you were established among them.

There are many things in Agricultural and Domestic Economy, if not in Political Economy, which have hitherto been better understood and practiced at the north than in the more southern states of the Union. Especially has this been the case in the New England states, owing doubtless, somewhat to the nature of their country and soil, but more to the character of their people. Those of them engaged in agriculture, have long understood and practiced the doctrine of making the farm and their own domestic labor, produce them as far as possible, all the necessaries of life, their clothing as well as food, so as to buy but little, and thus pay out as little money as possible; and the extent to which they have succeeded in this, would be matter of wonder and surprise to those who are unaccustomed to witness it; many wealthy and respectable families coming very near the mark, of "living within themselves,"—perhaps quite as near as is desirable. In this *frugality*, has lain the true secret of their superior success and real independence, and their general freedom from debt and embarrassment in these times of universal difficulty and depression. These means and elements of independence, are to a considerable extent, worthy of *transplantation* to the southern and south-western portion of our country, where in some things, as I will presently explain, they will admit of a ready adaptation, on a more extended scale.

I notice that the south is apparently waking up somewhat, to the great importance of this subject, and I am disposed to give you credit for some instrumentality in drawing attention to it. Instead of devoting their whole strength as heretofore, to the production of some one great staple, cotton for example, which is liable to failure of crop, and at times to great depression of price in market, they are now learning that it is best to raise their own *corn* and *pork*, as well as other provisions, and as far as practicable, to produce within themselves, clothing for their laborers and families, instead of buying and paying out money for everything they consume. In proportion as they succeed in putting this in practice, will be their independence and permanent prosperity.

In natural connection with this subject, it has appeared to me that the south and west would be great gainers by the introduction of some new staples of an extensive and permanently important character, adapted to their soils and climate.

More desirable than ever, does this seem at the present time, when almost all our products are so exceedingly depressed in price, as scarcely to remunerate the cost of production, after deducting the expense of transportation to market. The article of silk has been named, and much discussed. While I do not doubt that it is destined to become, at no distant day, an important production of all parts of the United States, I leave it to be dealt with by those who are better informed and more competent to the task of explaining its cultivation than myself. But I have another article in view, not in any degree speculative nor of doubtful success, which rightly managed, is capable of becoming a *mine of wealth* to large portions of the south and west, and it is capable too, of immediate introduction; indeed never before could it have been done so cheaply and advantageously as now. I have reference to the extensive introduction of SHEEP, the production of wool of the higher grades of quality, an article which will never go out of fashion, which will better, beyond all comparison better, than any other product except silk, bear the cost of transportation to market, and which will always, like cotton, command a ready sale to any extent. It can be put in bags and transported to market by land and water, as easily and about as cheaply per pound as cotton, while its value in market will be at least five or six times as great.

One word as to the adaptation of the climate and soil of the southern and western country for sheep. On this subject there formerly prevailed considerable misconception, and still does to some extent, in part the offspring of *interest*, but far more from real ignorance in regard to it.

I was myself taught to believe that the *home*, the natural country for fine wooled sheep, was an extreme cold northern climate, where winter reigns half or three-quarters of the year, Vermont, for instance; and that they would not thrive, and that their fine wool would turn to *hair*, &c. &c., in our country south of a certain latitude; the southwardly part of Connecticut, I think, was where the imaginary south line was drawn; and being in my childhood more fond of sheep than I was of cold weather, I used in my simplicity to be afraid that they might not do well so far south in our country, as where I might choose to pitch my tent for life. But I have lived to become satisfied that those fears were wholly groundless, and that so far from New England and the north being the *only* portion of our country adapted to the growth of fine wool, that there are other portions of the United States, large and extensive tracts at the south and west, which are not only as well, but in truth, far better adapted in all important respects, to the successful and profitable production of fine wool. But enough, you will say, for this time. In my next, we will, if you please, consider and discuss the subject of what part of the United States is best adapted for profitable sheep-farming—also if we have then time and space for it, the question, what kind of sheep are best calculated for that object.

In the mean time,
Believe me very truly yours,
February 3d, 1843. AMERICUS.

When we wrote the article on Crops for Soiling, in the February No. of the American Agriculturist, we were well aware of the merits of Lucern, as we had ourselves cultivated it several years in succession, although under somewhat unfavorable circumstances; and aside from this, we had repeatedly seen it growing in different parts of our country, and in Europe. In taking up the pen we intended to be very brief, and point out such crops only as could be *generally* cultivated in the country. It will be seen that our correspondent himself acknowledges that lucern requires a peculiar soil in order to flourish well, and that much care and attention must be devoted to it the first year of its growth; for these reasons we cannot agree with him when he says, that lucern is to be preferred to rye and corn, except, perhaps, (and even here we have our doubts,) in those localities which abound in the dryest, deepest, richest, and most friable loams. And when we say *friable loams*, we mean those of which sand is the almost exclusive ingredient of the composition; for what is called a friable loam at the west, where some clay is mingled with it, our friends there informed us they found totally unfit for lucern; but corn, rye, wheat, and the clovers flourished in it admirably.

Although we are not precisely agreed as to the full merits of lucern, we are not the less obliged to our correspondent for his excellent communication. We esteem lucern a valuable adjunct in soiling, and are glad that he has directed attention to it; and if he will add still further to our obligations by giving us his name, we shall do ourselves the pleasure of calling upon him when spring is further advanced, and have a discussion in the very fields themselves; and if they do not in their luxuriant growth of vegetation, make a pretty strong argument on their own account, all is we shall be greatly disappointed. Will our correspondent try one acre of our recommendation of soiling, along-side of an acre of his own, and see which pays the best? If he will, and give us the result of the experiment, we hereby promise to do him an especial favor in return for his trouble; and we think this would be the only true way of deciding the question of lucern *versus* corn, rye, wheat, clover, &c.

For the American Agriculturist.

LUCERN FOR SOILING.—SUGAR BEET.

Flushing, Queen's Co., Feb. 10, 1843.

Messrs. A. B. & R. L. Allen:—

I noticed in the last number of your paper, an article on the cultivation of rye, vetches, peas, and corn, sown broadcast and cutting them for soiling stock. Now I should much prefer lucern to any of these, for an acre of it will keep five cows from the middle of May to the middle of October, if cut and given them when green, and it may be cut five times for soiling, and three times for hay during the summer. It will produce three tons of hay to the acre the first cutting, and one and a half tons each succeeding cutting.

It flourishes most luxuriantly in deep, rich, friable loams, though it will also thrive in any good, dry soil; but the land must be kept as free as possible from weeds, otherwise its growth will be greatly impeded. No land is too rich for it, and the soil must be deep and dry, otherwise it is useless to attempt to grow lucern. The potatoe crop heavily dressed with long manure is a good preparation for it, and the ground should be plowed as deeply as possible, as it is a tap-rooted plant, and in a loose sandy soil the roots have been known to run to the depth of 4 feet; the seed should be sown from the 1st to the 15th of May. It may be sown on a crop of wheat, rye, or barley; twenty pounds of seed should be allowed to the acre, be put in with a light harrow, and the operation finished with the roller. The ground should be harrowed every spring to destroy grass and weeds, and occasionally top-dressed with bone dust, ashes, or rotted manure, as best suits the convenience of the farmer. It is an excellent food for horses and cows whether in a dry or green state; and when well laid down and properly attended to, it will last ten years. It is quite as hardy as red clover, and much more valuable.

I have raised the sugar beet for several years and think them very valuable food for stock, milch cows particularly, making them give an abundance of the richest milk, quite equal to that produced from grass; they are also very good for hogs. I have fed them to my breeding sows and store hogs, together with the wash of the kitchen, and they are now in as good order as any farmer need desire; but a Berkshire will get fat where a razor-back would starve.

Respectfully, W.

For the American Agriculturist.

TOUR FROM NEW YORK TO MOUNT VERNON.

In going south from New York, one is sensibly struck with the apparent sterility of the soil of New Jersey, but by the recent discovery of extensive marl beds and shell lime, and their application in frequent instances upon its surface, it has been rendered quite productive. Its locality between the two great cities of New York and Philadelphia, gives it extraordinary advantages of market, and should stimulate its husbandmen to the highest cultivation of which the soil is capable. Fruits grow in great luxuriance, and are an important item of revenue; and probably the best peaches in America are produced in the extensive orchards of New Jersey. Twenty thousand dollars have been received in one year from the orchard of a single proprietor. The Sweet or Carolina potatoe is also grown in considerable quantities for market, in addition to the ordinary farm productions of the northern states.

Reaching the Pennsylvania side of the Delaware, the soil is evidently of a much better quality, possessing more of a clayey sub-soil, and with good cultivation, it sustains a stronger and more durable vegetation on the surface, than do the sandy and thinner soils of the opposite state. Nothing can exceed the beauty of the highly cultivated farms for miles above and below, and west of Philadelphia. The buildings, composed of farm-houses, barns, and out-houses, constructed in many, and perhaps most cases, of durable stone, neatly whitewashed, and in systematic order, present a substantial, cheerful, and opulent features of this fine agricultural region. These farms are worth from one to two hundred dollars per acre, even to the extent of fifty miles into the interior of the counties of Berks and Lancaster.

Lime is the great basis of their manures in this region, and it is applied in no stinted quantity, as the exigencies of the land may require, from 50 to 150 bushels to the acre, once in eight, ten, or twelve years. This article costs from 10 to 30 cents per bushel upon the farm, as it may be more or less contiguous to the kilns and quarries. The cultivation between Philadelphia and Wilmington in Delaware is of a high order, and the country about the latter city is eminently beautiful. From thence, south to Baltimore, it gradually deteriorates, with a less capable soil; yet beautifully undulating in its surface, and abundantly susceptible of high cultivation, with a proper application to the soil of the muck beds that abound in the swamps and the almost inexhaustible lime quarries, and marl beds; to say nothing of the immense quantities of fish and shells that exist in the neighboring waters; no part of our country can be brought into a more productive condition than this. The climate for a great part of the year is delightful, and nowhere do fruits flourish more luxuriantly than in the region of the Delaware and Chesapeake bays; and agricultural capital judiciously expended, could in no place be more profitably employed.

Neighborhood of Washington.—Between Baltimore and Washington the same pleasing surface of country continues, possessing great agricultural capabilities, but under a long course of severe cropping in corn, wheat, and tobacco, years ago it became exhausted, and is now abandoned to utter desolation; and thousands of acres, as the traveler passes over the ancient corn and tobacco hills are visible, as yet hardly covered by a growth of feeble and sickly green herbage. There is certainly something wrong in all this, and with the ready and abundant markets afforded by the numerous seaports of the vicinity, it is a standing wonder, particularly to the passers by from the New England states, whose soil is naturally far inferior to this, why so much *capable* land is abandoned to utter waste and sterility. To the disgrace of our American enterprise the neighborhood of Washington has hardly any perceptible cultivation. Surrounded by an amphitheatre of hills nowhere surpassed in beauty and position, with an occasional exception it bears the same cheerless and dull monotony of negligence as the poorest soil in the land.

Can it be that the exciting, restless, political atmosphere of the seat of government withers all attempts at improving this otherwise charming country? I leave this for political economists to solve. But certain it is, that a more wretched agricultural neighborhood than that of Washington does not exist in the United States, nor one where an intelligent and a high order of husbandry would find a more abundant reward. Shame on the sloth and ignorance that thus encircles the capital of our nation! Were I alone in this opinion, I should distrust my own judgment;—but on comparing notes with numerous strangers, members of Congress, and residents of many years in the city, I find that there is no mistake in the matter. It is, however, some relief to remark, that within the last ten years a few individuals of enterprise and foresight have purchased considerable tracts of land in the neighborhood, and have commenced an improved cultivation; and by the partial developments already made, are fully satisfied of the utility and profits of their investments. Lands well wooded, delightfully situated, possessing a naturally good soil, and requiring but the application of a correct mode of culture to make them equally valuable and productive to any farms in the country, may be bought within five to ten miles of the city of Washington for eight and ten dollars per acre! and within an hour's drive of perhaps the very best market in the country. Lime is abundant in the vicinity, and not a doubt can exist that with its aid the best results will follow. Look at the neighborhood of Boston, naturally one of the most sterile and forbidding soils to the agriculturist imaginable. Yet by a diligent cultivation, how productive—how beautiful! Yet far inferior in natural capabilities to that of Washington. But this state of things must change. The schoolmaster in husbandry, as well as in political and moral science, is abroad, and all this salubrious region will ere long bear the print of his footsteps.

A Ride to Mount Vernon.—It was twenty-five years since I had seen the last residence of the Father of his country, and then when almost a boy. On a fine sunny May morning I embarked in the steamboat for Alexandria. On my way thither—an hour's sail on the Potomac, a truly noble and beautiful river, brought me to Alexandria, a sober-looking, well-built, and apparently declining city, of much note in the ancient days of Old Virginia. When I before visited Mount Vernon, it was occupied by the late Judge Washington, a nephew of the General, a most estimable man, but who paid little or no attention to agriculture, and barely kept the estate in repair, more perhaps from a pious feeling of veneration to the memory of his illustrious relative, than from any revenue that he derived from it.

I well remembered the feeling of surprise which almost overwhelmed me when in my youthful visit I first saw on the outskirts of the estate, its dilapidated fences; its stunted, straggling woodlands, its neglected cultivation, and its apparent poverty of soil. Yet as the last resting-place of the greatest man of his age, or of his country, it had become so hallowed in my early recollections, that, notwithstanding all these disappointments, when I approached the dwelling, after wandering a mile through a ruined old park, I was enraptured with the quiet beauty of the home grounds which enclose the ancient mansion, and gazed for hours from the charmingly forested lawn in front, which looks out for miles on the wide Potomac. Here too, was much good cultivation; orchards, fields of grain, meadows, and pastures lay about the domain, and the garden was richly stocked with rare and valuable plants, as well as the necessary family vegetables; while extensive green-houses displayed luxuriant varieties of exotic fruits, magnificent and beautiful flowers, and curious specimens of tropical plants. Soon after that period, Judge Washington ceased to exist, and the place passed into the hands of his nephew, the late John A. Washington of Upper Virginia. But a very few years after removing to Mount Vernon, this amiable gentleman died, leaving a widow with a young family, and their household servants, the sole occupants of the estate. At the time of my visit they were absent, and I was told that the estate was now left in the possession of the eldest son of this family, yet quite a youth, and that the mother and her still young family were about returning to their old residence in the Shenandoah Valley.

From Alexandria to Mount Vernon, the country is finely cultivated for two or three miles out of town, but farther on, the farms become gradually more neglected, until for miles before Mount Vernon is reached, the country with an occasional exception is almost a monotonous waste. The Mount Vernon estate now comprises but a small part of the extensive domain which it embraced in the days of its illustrious proprietor, when it extended for several miles on the high road that passed along and back from the river. The once productive and well cultivated fields are now thrown open and abandoned, covered by a stinted growth of wild bushes, and straggling woods, washed by unsightly gullies; and after entering the once beautiful park which approaches the home grounds and mansion, the highway, for a mile, after passing the crumbling porter's lodge at the gate, is scarcely passable, so washed is its narrow carriage way by the rains and neglected water courses of nearly half a century. A few wretched cattle were picking a more wretched subsistence from the stinted broom grass that grew in neglected patches here and there, and a score or two of gaunt, long-tailed sheep were shifting as best they could for a scanty living, among the bushes and tangled briars which grew among the scattered wood, filling the mind with ideas of misery and utter desolation. What a contrast was this to the pictures of thrifty husbandry, comfort, and abundance, of which I had so often heard in my early years, and that existed in the days of its possession and cultivation by General Washington; reputed, as indeed he really was, one of the best and most skilful of managers! Passing on to the numerous buildings which once formed the family residence, the servants' lodges which skirt the road were in ruins. The green-houses had years ago been burned to the ground, and not even the shattered fragments removed. The walled terraces which skirted the high grounds where stands the old mansion were all tumbled into decay, and the old house itself stood in moaning desolation among the general ruin. Neglect and dilapidation stood out prominent as the reigning genius of the place, and I wandered about sorrowful and dejected at the mournful appearance of all around me. Immediately around the house itself were a few enclosures, but driven by the encroaching wild vines and brush-wood into a scanty and restricted compass. In these were some tolerable crops of young grain, and meadows, and pastures. The garden was supplied with a few vegetables for family use, and the once brave and luxuriant old orchard below the dwelling, was wild with straggling branches that years ago required the pruning knife; and the walls that enclosed it were almost hemmed in, and covered with an unsightly growth of noxious shrubbery and weeds. The old vault, where for many years lay the last remains of Washington, was fallen in and tenantless, and a new one of brick, and of respectable appearance and dimensions was built farther down the river, which now contains the remains of himself and family.

Were I here to indulge in a record of my sensations, while gazing on the marble sarcophagus which contained the remains of him who was "first in war, first in peace, and first in the hearts of his countrymen," I might perform a duty most grateful to my personal feelings, but foreign from the object of this letter, and out of place here; yet I could not but regret that a spot so holy as the last resting-place of Washington should be so utterly neglected, and the noble domain which his genius so well loved to cultivate, and on which for a long series of years he had given so shining an example of agricultural advancement to his countrymen, should thus be abandoned to ruin and decay. This to be sure, is no monumental country. History alone is to be the record of noble deeds and of great actions in our land, yet I felt sorrowful and cast down, that the supineness of his native state should permit the once highly cultivated and tasteful residence of her cherished son, to present so gloomy a shadow of its once luxuriant greatness.

Mount Vernon, and all the country on both sides the Potomac, is susceptible of great fertility by the application of active stimulants to its soil; and I devoutly trust that the time will arrive, when all this beautiful and most interesting region will again luxuriate in gladness, and become redolent with its fruitful fields, and teeming harvests, and superb flocks and herds.

L. F. Allen.

For the American Agriculturist.

SOUTHERN PRODUCTS.

Mississippi City, 18th Jan., 1843.

Messrs. A. B. & R. L. Allen:

It always affords me great pleasure to communicate anything useful to the agricultural interests of this great Union. I only regret I am not capable of doing more to aid your virtuous and laudable undertaking, and more fully realize your expectations with regard to our productions. I am well aware that "the people of the North have strange conceptions of Southern capabilities, in an agricultural point of view." The reason of this is very evident. We have, it is true, many people from the North living in the South, many of whom are *now* planters; but we have very few who were *raised* farmers in the North. The Northern people who have come South, were everything and anything but farmers; priests, lawyers, doctors, mechanics, merchants, traders, pedlars, seamen, patent-right venders, &c., &c., but no farmers; hence they do not enlighten the minds of their farming friends North, with regard to the agricultural resources of this country. True, they sometimes speak of large cotton or sugar estates, with large stocks of slaves to work them, with interesting descriptions of *certain rich widows, or planters' daughters of fortune,* and how successful trade has been in this, or other respects, with themselves or some of their friends. But this is a kind of information that your real honest, industrious, economical farmers rarely see and never heed; such stuff offers them no inducements; it is worthy only of the attention of professional gentry of every name and denomination.

I witnessed in the island of Cuba a striking evidence of some of the above facts. From Matanzas to Cardenas, decidedly one of the finest tracts of country I ever saw, in which are settled and engaged in planting, both sugar and cotton, many persons from our Northern States; every one of whom, so far as I could learn, (except one,) had either been raised merchants or seamen. The one raised a farmer in Maryland, had the finest and most profitable estate in the country. The Creole Spaniard pursues with great tenacity and reverence the unaltered course of his ancestors, and considers all improvements innovations. The American merchant, or ship Captain, when turning planter, must pursue the same course as the Creole; because he knows nothing of agriculture himself, experimentally. The consequence is, no improvement is made by Northern men in Southern agriculture. But if we could start a company of your real sound, sensible, *practical* farmers, to our sunny shores, they would soon give you accounts of the agricultural capabilities of our country, as strange and astonishing to their friends left behind them, as the reality would be profitable and pleasing to them in their new homes. I would refer such as desire information on this subject, to Dr. S. A. Cartwright's truly valuable and interesting communication, published in the October No. of your paper, and some of my own opinions in the August No. of said work. My own experiments are very limited, but so far have proved very successful. The capacity of this country for raising grapes, equal to any other for making wine, is not now a doubtful question. Some of my vines yielded, last year, fifteen bushels of grapes to the vine; and not one less than three bushels from cuttings planted in January, 1839. I think that the successful cultivation of the olive, for making oil and pickles, may be carried on to any extent; and a successful competition with any other country may now be regarded as certain, from the experiments of Mr. Debuys, at Biloxi, ten miles east of this.

I have now a few fine apples and pears raised near here this year. The quince, peach, nectarine, apricot, plumb, (all kinds) pomegranate, jujube, fig, mulberry, pecan, chestnut, chincopin and raspberry, all grow and bear as finely here as any place on earth, and never *miss* a crop any year. From an experiment I made this year on a poor ridge, I find our poorer lands, without manure, will yield seventy-five bushels of pindars and one ton of hay per acre. The pindar tops are equal to the best clover for hay, and resembles it very much. I have raised fine turnips on new land, with no other manure than three barrels shell lime to the acre, many of the turnips seven and a half inches across; but mostly four to six inches, planted 6th Sept. last. We raise from seventy-five to one hundred and fifty bushels sweet potatoes to the acre, and I think with proper culture could raise over two hundred.

I know of no spot within a mile of the sea shore, where there is not plenty of decomposed vegetable matter, in low places, or the bottoms of slow running streams. These beds of manure lay parallel with the sea shore, and rarely more than two hundred yards apart; they are from ten to two hundred yards wide, and from one to six feet deep, of *purely decomposed vegetable matter.* Since reading Dr. Dana's Muck Manual last summer, I have made some experiments with this muck, mixing lime with it, and am persuaded it will answer as well as the best stable manure for our lands. I planted my watermelons in hills thus prepared last spring, and had more melons than I expected by thousands, many hundreds were permitted to rot in the field. The earliest ripened 28th May. I am now preparing to plant a small vineyard with *cuttings,* and if I do not make 5000 gallons of wine to the acre in the summer of 1846, I shall not realize my present expectations. I have planted one hundred olive cuttings and thirty of the jujube trees, to get a start of those fruits. The undoubted health of our country and our delightful Southern sea breezes, and convenience to the New Orleans and Mobile markets, must make the growing of fruits and vegetables here a very important, profitable and desirable business.

I have lately procured a small flock of sheep; they were raised in this country, and have never tasted food except what they get in the forest; they look well, and have a good coat of wool, and I think will double their number in another month. Several gentlemen have visited this part of the country lately, with the object of examining its capacity to graze sheep, goats and other stock; to yield turpentine, tar, resin, lampblack, &c., and all have been much pleased with the prospects, and many of them are now preparing to locate here permanently, and consult "health and contentment," with a reasonable competence, instead of fretting away their lives in a sickly country, stimulated alone by the ephemeral idea, of making cotton bales or sugar hogsheads by the hundreds or thousands.

The importance of our fisheries may be judged of from the fact, that many persons come here from the North every fall with their fishing smacks, and continue the business until spring, when they return North to spend the summer with their families, but are back again with the first frost.

Very respectfully yours,

Jno. J. McCaughan.

We need only say that we heartily approve of the suggestions below of Mr. Robinson, in getting up the dinner at the forthcoming meeting, of the N. Y. State Agricultural Society at Rochester, next September. It is the same manner in which the Fourth of July is usually celebrated in New England, and more delightful re-unions are not known. We sincerely hope that a strong body of our prairie friends will be present; we assure them that they will be heartily welcome—wives, daughters, and all. We expect a goodly number of our Canadian neighbors will be present at Rochester, and as for New York, especially west of Cayuga Bridge, we hope to witness such a turn out as she never yet made even in the most exciting political times. We anticipate a superb show of everything in the farming line in September, and a full and enthusiastic meeting.

For the American Agriculturist.

Dinner at the next meeting of the N. Y. State Agricultural Society.

Messrs. A. B. & R. L. Allen:

Well, and so you "hope to have three thousand guests at an agricultural dinner at Rochester, at your next State Fair." Then let me tell you how,—you must adopt the western fashion, and have a *free dinner*. It is easily got up, and no one feels the expense. Let a few of the spirited friends of these great holidays and farmer's festivals, in the vicinity of Rochester meet together, a few weeks before the Fair, and appoint a "dinner committee," whose business it shall be to see that a suitable spot of ground is selected, and tables and seats built of rough boards, that any lumberman will lend for the occasion,—and so will some crockery merchant, who desires the custom of the farmers, lend the necessary articles, while a few bolts of cotton sheeting, that will be readily donated by the merchants, will make very good table *linen*, though I would much prefer to see the tables covered with a real home-made flaxen cloth. And now for the substantials, wherewithal to crown the tables, and furnish forth the joyous feast, that will be a real "thanksgiving dinner" to the twice told three thousand happy human beings who will partake of it.

Let the word once go forth, that the farmers, and the farmer's wives, and sons and daughters, are going to provide the feast, and my word for it, you will see such a display of good things as you never saw collected together at one dinner party before. Even many of the dwellers in the city will be aroused by the excitement and novelty of the scene, and pour forth their contributions of delicacies, that will serve by way of desert to the more substantial viands of the farmers. This is the only plan of a public dinner that affords an opportunity for all parties, classes, and sexes to meet together in the full, free, unrestrained enjoyment of life. Every farmer should bring his family, for those who furnish the good things should also be present.

This is the kind of dinner, and this is the way that so great a number met together at our great dinner in Illinois, which I have mentioned in the article to which your note referred to, is appended.

There was a little incident at that dinner, which I should like to see imitated at every similar one. Two daughters of a very respectable farmer, appeared in beautiful woollen shawls, entirely the work of their own hands, even from the *rearing* of the lambs that produced the fine wool, to the last finishing stroke of the excellent fabric. They were publicly complimented at the table, and the association of ideas in my mind at the time, tended much to heighten the natural beauty of their faces, which showed much good sense in every feature. And such incidents will often happen, and be commented upon and patterned after, if such occasions are given to bring them to light. I look upon these great family dinners as one of the very best features in our agricultural shows. These are shows of human nature. They ought to be fostered and encouraged.

Addresses, conversations, toasts and sentiments, at such a time, make deep impressions upon the mind. And if you wish me "and others of my prairie friends to be with you and partake of the good things" at your next State Fair, you must get up a public dinner after our fashion. Try it; it will go well and do good.

Your friend,

Solon Robinson.

Lake Co. H., Ia., Jan. 25, 1843.

TO CORRESPONDENTS.

We had prepared a short article on the prices of wool and further protection, in answer to Mr. Gidings, an Illinois Farmer, and others, but wishing to wait some more information on this important subject, defer it till April No. Communications are received from John Lewis, A. Campbell, Wm. Partridge, Charles Starr, Jr., Solon Robinson, John J. McCaughan, L. F. Allen, T. L. C., Americus, and H. A. Field, which shall appear in our next.

Mr. Hussey's request is acceded to. The engravings should be here as early as the 15th March, to appear in our April No. All matter that is not sent in by the middle of the month hereafter, must necessarily lay over till next number, and it would be better to have it come in as early as the 10th. In order to get our work out promptly, it has become necessary to go early to press.

As our own article on the cultivation of Sugar Beet would extend to two numbers, we have concluded to defer it till April, so as to give it complete to our readers in the 2d volume.

We had written an article entitled "Rural Walk in the City," noticing the splendid seed stores and nursery establishments here, but found too late that we had not room for it. The "Selections" which appear in this No., have been in type some time—we shall condense hereafter and give the substance only of such papers.

SELECTIONS.

Lime Kilns.

Limestone used to be calcined in a very rude kiln, formed by enclosing a circular space of 10 or 15 feet diameter, by rude stone walls 4 or 5 feet high, and filling the cylindrical cavity with alternate layers of turf or coal and limestone broken into moderate pieces. A bed of brushwood was usually placed at the bottom, to facilitate the kindling of the kiln. Whenever the combustion was fairly commenced, the top, piled into a conicle form, was covered in with sods, to render the calcination slow and regular. This method being found relatively inconvenient and ineffectual, was succeeded by a permanent kiln built of stones or brickwork, in the shape of a truncated cone with the narrow end undermost, and closed at bottom by an iron grate. Into this kiln, the fuel and limestone were introduced at the top in alternate layers, beginning, of course, with the former; and the charge was either allowed to burn out, when the lime was altogether removed at a door near the bottom, or the kiln was successively fed with fresh materials, in alternate beds, as the former supply sunk down by the calcination, while the thoroughly burnt lime at the bottom was successively raked out by a side door immediately above the grate. The interior of the lime kiln has been changed of late years from the conical to the elliptical form; and probably the best is that of an egg placed with its narrow end undermost, and truncated both above and below; the ground plot or bottom of the kiln being compressed so as to give an elliptical section, with an *eye* or draft-hole towards each end of that ellipse. A kiln thus arched in above gives a reverberatory heat to the upper materials, and also favors their falling freely down in proportion as the finished lime is raked out below; advantages which the conical form does not afford. The size of the draft-notes for extracting the quick-lime, should be proportionate to the size of the kiln, in order to admit a sufficient current of air to ascend with the smoke and flame, which is found to facilitate the extrication of the carbonic acid. The kilns are called *perpetual*, because the operation is carried on continuously as long as the building lasts; and *draw-kilns*, from the mode of discharging them by raking out the lime into carts placed against the draft-holes. Three bushels of calcined limestone, or lime-shells, are produced on an average for every bushel of coals consumed. Such kilns should be built up against the face of a cliff, so that easy access may be gained to the mouth for charging, by making a sloping cart road to the top of the bank.

Fig. 19.

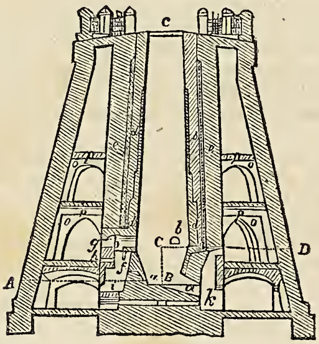


Fig. 20.

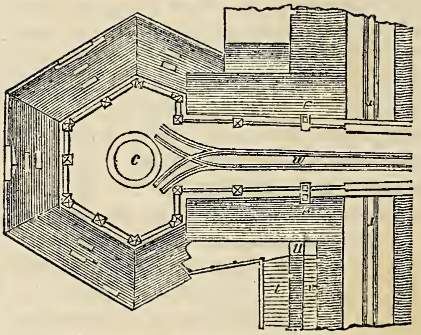


Fig. 21.

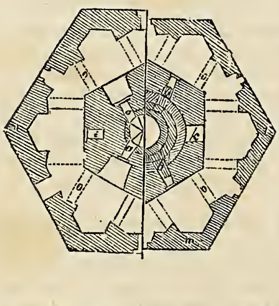
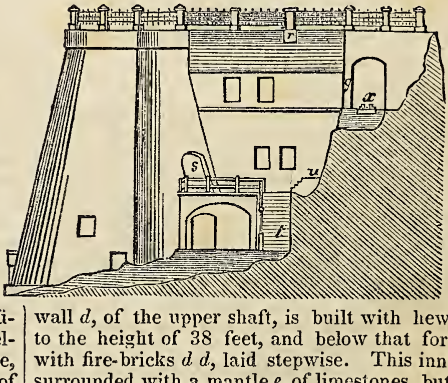


Fig. 22.



Figs. 19, 20, 21, 22, represent the *lime kiln* of Rüdersdorf, near Berlin, upon the continuous plan, excellently constructed for economizing fuel. It is triple, and yields a threefold product. *Fig*. 20, is a view of it as seen above; *fig*. 22, the elevation and general appearance of one side; *fig*. 19, a vertical section, and *fig*. 21, the ground plan in the line A B C D of *fig*. 19. The inner shaft *fig*. 19, has the form of two truncated cones, with their larger circular ends applied to each other; it has the greatest width at the level of the fire-door *b*, where it is 8 feet in diameter; it is narrower below at the discharge door, and at the top orifice, where it is about 6 feet in diameter. The interior wall *d*, of the upper shaft, is built with hewn stones, to the height of 38 feet, and below that for 25 feet, with fire-bricks *d d*, laid stepwise. This inner wall is surrounded with a mantle *e*, of limestones, but between the two there is a small vacant space of a few inches filled with ashes, in order to allow of the expansion of the interior with heat taking place, without shattering the mass of the building.

The fire-grate *b*, consists of fire-tiles, which at the middle, where the single pieces press together, lie upon an arched support *f*. The fire-door is also arched, and is secured by fire-tiles. *g*, is the iron door in front of that orifice. The tiles which form the grate have three or four slits of an inch wide for admitting the air, which enters through the canal *h*. The under part of the shaft from the fire to the hearth, is 7 feet, and the outer enclosing wall is constructed of limestone, the lining being of fire-bricks. Here are the ash-pit *i*, the discharge outlet *a*, and the canal *k*, in front of the outlet. Each ash-pit is shut with an iron door, which is opened only when the space *i* becomes filled with ashes. These indeed are allowed to remain till they get cool enough to be removed without inconvenience.

The discharge outlets are also furnished with iron doors, which are opened only for taking out the lime, and are carefully luted with loam during the burning. The outer walls *l m n* of the kiln, are not essentially necessary, but convenient, because they afford room for the lime to lie in the lower floor, and the fuel in the second. The several stories are formed of groined arches *o*, and platforms *p*, covered over with limestone slabs. In the third and fourth stories the workmen lodge at night. See *fig.* 22. Some enter their apartments by the upper door *q;* others by the lower door *s*. *r* is one of the chimneys for the several fire-places of the workmen. *t u v* are stairs.

As the limestone is introduced at top, the mouth of the kiln is surrounded with a strong iron balustrade to prevent the danger of the people tumbling in. The platform is laid with rails *w*, for the wagons of limestone, drawn by horses, to run upon. *x* is another rail-way, leading to another kiln. Such kilns are named after the number of their fire-doors, single, twofold, threefold, fourfold, &c.; from three to five being the most usual. The outer form of the kiln also is determined by the number of the furnaces; being a truncated pyramid of equal sides; and in the middle of each alternate side, there is a fire-place, and a discharge outlet. A cubic foot of limestone requires for burning, one and five-twelfths of a cubic foot of wood, and one and a half of turf.

When the kiln is to be set in action, it is filled with rough limestone, to the height C D, or to the level of the firing; a wood fire is kindled in *a*, and kept up till the lime is calcined. Upon this mass of quicklime, a fresh quantity of limestone is introduced, not thrown in at the mouth, but let down in buckets, till the kiln be quite full; while over the top a cone of limestone is piled up, about four feet high. A turf-fire is now kindled in the furnaces *b*. Whenever the upper stones are well calcined, the lime under the fire-level is taken out, the superior column falls in, a new cone is piled up, and the process goes on thus without interruption, and without the necessity of once putting a fire into *a;* for in the space C B, the lime must be always well calcined. The discharge of lime takes place every 12 hours, and it amounts at each time in a threefold kiln, to from 20 to 24 Prussian *tonnes* of 6 imperial bushels each; or to 130 bushels imperial upon the average. It is found by experience, that fresh-broken limestone which contains a little moisture, calcines more readily than what has been dried by exposure for some time to the air; in consequence of the vapor of water promoting the escape of the carbonic acid gas; a fact well exemplified in distilling essential oils, as oil of turpentine and naptha, which come over with the steam of water, at upwards of 100 degrees F. below their natural term of ebullition. Six bushels of Rudersdorf quicklime weigh from 280 to 306 pounds.

When coals are used for fuel in a well-constructed perpetual, or draw kiln, about 1 measure of them should suffice for 4 or 5 of limestone.

The most extensive employment of quicklime is in agriculture, on which subject instructive details are given in Loudon's Encyclo. of Agriculture and Gardening.

(*From thr Plymouth* (*Eng.*) *Herald.*)

Practical Directions for the Place and Management of the Dung-heap.

Farmers have generally found out the advantage of having a dung-pit instead of a dung-heap; but still the rich drainage of the dung is much of it allowed to run away; the urine from the stables, &c., does not half of it run into the dung, though it is the best part, the essence of the whole; and the privy manure, which is better still, is mostly neglected altogether.

All drainings from the stables, cow-houses, and styes, should run into the pit, and the overflowings should be caught in another pit, to throw back in dry weather.

The following is a cheap and effectual method of doing all this:—When convenient, the pit should be on the north side of a wall, or of some trees, to shade off the sun; or under a shed, to keep off both sun and rain; but these advantages cannot always be had without too much cost.

Having selected the best place for your pit, first lay in way soil, peat, or any soil as different as possible from that of your farm, and give it a hollow surface, like a great tea-saucer. Upon this lay potato stalks, and any other vegetable matters, easy to ferment, and hereupon a layer of dung. Next a layer of vegetable matter, as peat, turf, bark, rotten weeds, ferns, leaves, or any kind of dead vegetable, to increase your quantity; and so every week, cover your dung from the stables, styes, &c., with three or four times as much dead vegetable matter; thus making up your heap in alternate layers. The urine should all run into the pit from stables and all, by narrow drains, where it will not be much exposed to evaporation; and another such drain should lead from it to a lower pit, to catch the overflowings when there are any; and keep them to throw back upon the dung in dry times. This lower pit should be deeper and smaller than the other, and must never be allowed to overflow, as that would be waste. It may contain cabbage stumps, and other things difficult to work, which may be thrown back upon the heap as they rot.

The lower pit may be used as a store of liquid manure, for watering young corn, in May or June; which gives it a start, and much strengthens its growth. In leaky ground, the bottom of the pits should be *staunched* with clay; and stones or gravel stamped in, to harden it.

The privy should discharge into the large pit, if possible, or else into the small one; and coal ashes (but not wood ashes,) are good to throw where this comes out. Saw-dust or turf-dust from the stacks do very well. House-washings, as soap-suds, &c., should also be thrown on the heap; but the wash of the country, and heavy floods of rain should not be allowed to enter it, but be led into the meadows by other channels.

In wet seasons, the top should be slanted to turn off the rain.

Each layer of dung being covered with a layer of peat or other dead vegetable matter, the whole heap, when finished, should be crusted over with way soil, or other earth, to retain the vapors.

The fermentation will be slower or quicker, as it is more or less covered and compressed.

Wherever your heaps are made, whether in the yard or the field, give them a bed of some sort to absorb the drainage, and crust them over with soil, and mix all up with the dung before spreading. The drainage carries down the strength of the heap; sometimes enough to kill the seed in the place where the heap stood; whilst it would have been of the greatest benefit if spread out with the dung.

Portable Manures, containing great strength in small compass.

These are very valuable to the farmer at a distance from towns, one load being, in many cases, sufficient for several acres. They generally force or forward the crop, without doing much to enrich the soil with humus.

Salt, 1 ton (value 25s.) is enough for 10 to 20 acres top dressing; though much more is used when plowed in to kill weeds, &c. For this purpose a ton may go to 3 or 4 acres.

Soot is an excellent top dressing, twenty bushels per acre; perhaps still better with two or three cwt. salt, just damped to prevent flying about in spreading. It should be sown upon wheat in calm evenings, when rain is expected.

Gypsum, on clover, when wet with dew or rain, and the weather clearing, that it may stick on the leaf; 5 or 6 cwt. per acre.

Bone-dust, excellent to drill in with turnip seed, 10 to 30 bushels per acre; and better mixed with half or quarter as much wood ashes. A top dressing of the turnips, after hoeing; of gypsum, 3 cwt. and salt 1 cwt. per acre, would probably help the bone-dust.

Nitrate of soda, and some other more expensive manures, seem to pay very well, when judiciously used; but the object of this paper being to help the small farmer forward, with but little outlay, they need not be dwelt on here.

It will be well, however, for the farmer, to know that lime, in compost with three or four times as much ditch or pond mud, laid out not very thick, and occasionally turned, gradually produces nitrate, more or less, according to the quality of the mud.

I am, Sir, yours, &c. &c.

13th Sept. 1842. J. Prideaux.

Potash as a Manure for Wheat.

Mr. W. M. Chatterley delivered his ninth lecture at Havering Bower, near Rumford, on Monday, 19th ult. on Saline Manures, in continuation.

The subject first spoken of was the manures containing potash as a base, those of soda having been treated in the last lecture. Potash was shewn to be present in every crop—nay, in almost every plant, more particularly in white crops which contained silica, (sand or flint) in considerable quantity; and most of all was it essential for wheat, as that plant contained, of all crops, the largest per centage of silica, and by potash alone could silica be taken into solution, so as to be absorbed and circulated with the sap of the plant, and subsequently deposited with its tissue. Moreover, it had been of late years discovered that those soils which yielded the most abundant wheat crops, always contained the larger quantity of potash, and that clay soils contained it naturally in considerable quantity—that is, considerable in proportion to the quantity required; for, it was well worthy of remark, that the quantity of potash contained in the wheat was by no means sufficient for the solution of the quantity of silica existing in the plant, and this led to the belief that the potash which conveyed the silica in solution to the plant, was returned to the soil, after having deposited its burden, and there again acted the part of a solvent for a fresh portion of silica, again to be conveyed to the crop. Wheat, unless supplied with a sufficiency of soluble silica, could not grow strongly and healthily; hence the necessity for the presence of potash, in order to its abundant supply; but not potash alone, but potash (itself an alkali) in union with an acid to neutralise its caustic properties, and form a salt. Thus CARBONATE OF POTASH (the *pearlash* of commerce,) and NITRATE OF POTASH (*nitre* or *saltpetre*,) were useful as manures in soils deficient of potash. The source whence these might be obtained most cheaply by the agriculturalist requiring potash, and the value of each as a manure, was the next point for consideration. With respect to pearlash or nitre, the price would probably exclude them from general or extensive use; but, if we look to the sources whence they may be obtained, we shall find them, for the most part, within the reach of all. The pearlashes of commerce are obtained from wood ashes in such countries as Canada and Russia, abounding in forest land. The ashes of various kinds of trees, shrubs, and herbs, contain quantities of this salt, varying from less than 1-10, as in the beech, oak, and elm, to about 7½ per cent., as in the wormwood. Herbs contain more than shrubs, shrubs more than trees, while the leaves and branches of trees contain more than the woody portions. Wood ashes, besides, contain varying quantities of silica, phosphate and carbonate of lime and magnesia, all highly useful for plants, containing matters which are the direct food for plants, as might readily be supposed, inasmuch as they are themselves the ashes of plants. Can potash be always obtained in sufficient quantity by these means? There are the hedge rows, bottoms, and woodland, unfortunately too frequent upon the generality of farms, which it is desirable to remove as much as possible; by burning these and mixing with the dung, or spreading over the land without much mixture, much benefit might be derived. But another question arises—Is it economical to consume so much vegetable matter which might be used as manure, if the seeds were prevented from germinating and the substance broken up, as might be effected by means of lime on the draining of the farm-yard? The one method or the other, or in fact both, are at the option of the agriculturist, as he may be in want of either, or may find each the cheaper or more convenient. Carbonate of potash is deliquescent (attracts moisture;) the same remark will, therefore, apply to this salt as was made with regard to those deliquescent salts mentioned in the last lecture.

With regard to NITRE, a considerable supply would be procured by the mixture of lime and vegetable matter left in contact for some length of time, which produced a decomposition of the vegetable matter, the carbon of which being converted into carbonic acid, united itself to the lime and formed chalk; while any portion of nitrogen which it contained, together with a supply obtained from the atmosphere, was, by the influence of the lime, induced to unite with the oxygen of the atmosphere, forming nitric acid; the nitric acid then combined with the lime to form nitrate of lime, and with any portion of potash that might be present to form nitrate of potash. By this means it may be observed that nitrogen and potash are both supplied at the same time, and to the nitrogen must be attributed a large share of the fertilising effect of the salt; and this leads us to the consideration of the other saline manures which contain NITROGEN. NITRATE of SODA is nothing more than another native nitre with *soda* instead of potash as the base in union with nitric acid; it is, perhaps, yet to be decided which of these two possesses the most fertilising properties, though the preponderance (especially for crops that contain potash,) is perhaps in favor of nitrate of potash. The difference of price will decide which will be used by the farmer: but it seems more than probable that other and cheaper sources of nitrogen will be chosen when it is desirable to supply this substance in a saline form. Farm-yard manure, and animal matter in general, as nightsoil, urine, blood, and guano, have already been spoken of as containing salts of ammonia, and ammonia has been shown to consist of hydrogen and nitrogen. The superiority of ammonia over nitric acid for the supply of nitrogen to plants is undoubted, and seems to be due to the greater facility with which it undergoes decomposition, forming the various nitrogenous products of vegetables, as gluten, alumen, &c., while the facility with which hydrogen (the other constituent) unites with the universally present oxygen to form water, is an additional cause of its fertilising effects.

Sulphate of ammonia seemed the salt best adapted for the use of the farmer, to supply his crops with nitrogen. This salt was now prepared by Mr. Croll's patent process for the purification of coal gas, and might be bought for about 16s. the cwt., and would most likely become much cheaper, as an inexhaustible supply might be procured by fitting up Mr. Croll's apparatus at the various gas works throughout the kingdom; a result which would no doubt ensue upon the demand of this article becoming general among agriculturists, who could not better consult their own interests than by using this salt—not in large quantities, for in most seasons from 1-2 to 3-4 of a cwt. per acre, as a top dressing, applied at two or three separate periods, would be found preferable; and with this, as with all the saline manures, small dressings judiciously applied, according to the condition of the crops, were more successful than large dressings of two or three cwt. or more, at a time, as recommended for some saline manures, or of forty to fifty cwt, as recommended for others. These small dressings would be proportioned to the wants of the crop, neither *burning them up*, nor making them *too growthy*, as has been complained of in some instances. *Soot* owes its efficacy to sulphate of ammonia contained in it. With regard to the efficacy of sulphate of ammonia, Mr. Chatterley shewed a tabular review of the result of experiments conducted upon a bad plant of wheat, on Mr. Hall's farm, with different quantities of this salt, in proof of the latter statements; the increase had been altogether beyond expectation: it should not be drilled with the seed.

With regard to saline manures in general, they, like all others, should not be applied unless the land is deficient in the substances which they, by their constituents, are fitted to supply; nor to land which is not properly drained; and, with regard especially to manures containing hydrogen, it should be remembered that, in order that they may stimulate the plant to growth, the vegetable matter must be present in the soil in sufficient quantity to supply the material, for though much may be obtained from the atmosphere, such as nitrogen and carbonic acid, still the soil should be in a good condition to supply more carbonic, phosphoric, and muriatic acids, lime, potash, soda, and magnesia, silica, &c., as these cannot be obtained elsewhere, and are absolutely necessary to the healthy existence of the plant. It is for want of a due attention to all these circumstances that so many contradictory accounts of the value of saline manures are propagated, that so much of unmerited praise and blame have been bestowed upon them.—*Ibid.*

To Preserve Sheep from the Gad Fly.

In vol VII of the N. E. Farmer, we find the following remarks upon this subject, by Mr. Fessenden:

"There exists in some parts of the country, a species of fly, which naturalists call *Œstus ovis*, of the same genus with that which deposits eggs in the hair of horses, and causes botts. This fly attacks sheep from about the middle of August to the middle of September, deposits its eggs in the nostrils of the animals, and causes those worms, which so frequently destroy them. The Mechanic's Gazette recommends as a preventive, covering the nostrils of sheep with a list of gauzy substance, through which the animal can breathe, and keeping it in place by some adhesive substance. We doubt, however, the practicability of 'keeping it in its place.' Another preventive which sheep-owners tell us is effectual, is to keep the noses of the sheep constantly smirched with tar, from about the middle of August to the latter end of September. If the sheep swallow some of the tar, so much the better, as it prevents or cures the rot, and confirms their health.

If the fly has performed its mischievous function and the seeds of the disorder are already sown, you may make use of the following: take half a pound of good Scotch snuff, pour two quarts of boiling water on it, stir it and let it stand till cold; inject about a table spoonful of this liquid and sediment up each nostril of the sheep with a syringe. This must be repeated three or four times at proper intervals, from the middle of October to the 1st of January; the grubs are then small and are easier destroyed than afterwards, and have not injured the sheep as they will if deferred until later. Half an ounce of assafœtida, pounded in a little water, and added to the snuff, will make it more effectual. The owner of the sheep need not be alarmed when the operation is performed, to see the sheep very drunk and apparently in the agonies of death, as they will in a few minutes recover. I never knew any bad effects to follow. Dry snuff may be blown up the nose with a quill, and have a good effect; but it is a tedious dirty job. I have tried vinegar and blue dye with but little or no success.

Instead of Scotch snuff, a decoction of tobacco will answer the purpose. A gentleman who owns a large flock of sheep, informs us that he had used it with perfect success. Spirits of turpentine is injected into the nostrils of sheep, as a remedy for worms; but that substance appears to possess one material disadvantage, which should preclude its use for that purpose, namely: when thrown into the nostrils it kills the *sheep* as well as the worms.—*N. E. Farmer.*

The Lead Trade.

The St. Louis Republican, on the authority of a respectable merchant of Galena, Ill., gives a statement of the quantity of lead exported from Galena, Dubuque, and all other points on the Upper Mississippi, by the river, and by Lake Michigan, during nine months, from March to November inclusive, in the years 1841 and 1842. Most of it is shipped in the form of pig lead, each pig weighing 70 lbs. Some is sent off in bars, and some in shot; but they are both reduced to pig in the statement; and the money value is annexed.

In 1841, the whole number of *pigs* sent by the Mississippi, was 455,814; by the Lake, 884 boxes bars, equal to 2750 pigs, and 2616 kegs shot, equal to 7640 pigs, making the total for 1841, equal to 493,404 pigs.

The price of the pig is put at 3 cts per lb., the bars, at 3 ½ cents, and the shot at 4½ cts. The total value in 1841, was $982,243.

In 1842, the whole number of pigs shipped by the river, was 447,859 pigs, and by the Lake, 25,000 pigs, and in the form of bars, what was equal to 840 pigs; making the total number of pigs 473,699, in 1842.

The price in 1842, was less than in 1841, being an average of about 2½ cts. per lb. for pig, and 3 cts. for the lead in bars. The total money value for the whole export of 1842, is put at $746,359 28.

From this statement it is plain that the Lead Trade is becoming a very important one.—*Alb. Daily Atlas.*

Rambouillet Wool.—We have at our office a specimen of this article, taken from a buck at Hartford, Conn., belonging to Mr. D. C. Collins. It was sent to us by Dr. M. W. Phillips, of Log Hall. It is remarkably fine.—*Southwestern Farmer.*

Agreeably to our request, Mr. L. B. Parsons of the Commercial Garden and Nursery, of Parsons & Co., Flushing, L. I., will furnish us a monthly calendar, suited to the latitude of New York, of the work necessary to be done in this department; and as he is a practical as well as a professional man, our readers may look to his remarks as a safe guide for their horticultural operations. His hints will be brief and general, rather than minute.

HORTICULTURAL CALENDAR FOR MARCH.

Kitchen Garden.—Hot-beds should now be made for bringing forward early cucumbers, melons, cabbages, cauliflowers, lettuce, radishes, &c. As soon as the frost is out of the ground, dress asparagus beds, or plant out new ones. Roots for this purpose ought not to be over two years old.—Sow peas, celery, parsley, onions, carrots, and all other root crops for early table vegetables, in the open ground. Tomatos, eggplants, and peppers, should be sown in pots, and forwarded in hot-beds for planting out next month.

Fruit Garden and Nursery.—Grape-vines that have not yet been pruned, must now be attended to, care being taken to leave two or three buds of last year's growth to bear fruit the ensuing season.—Fruit trees of every variety can also be pruned, although I am inclined to think that trees *flourish best* with *summer* pruning.—Trees of all kinds ought to be transplanted as soon after the frost leaves the ground as possible.—Dress strawberry beds, and see them cleaned of all weeds.—Prune and plant out gooseberries, currants, and raspberries.—Cuttings at this time can be made for the propogation of trees, shrubs, and roses of the hardy kinds; the latter should be first started under glass, but sheltered from the sun.

Ornamental Grounds, in which bulbs have been planted the preceding fall, stir to the depth of 3 inches. Make up the borders of the Flower Garden. Sow the more tender varieties of annuals in hot-beds the latter part of the month, at the same time perennial herbaceous plants can be transplanted.—Trim shrubs and hedges, and set out box edging.—See that the pleasure grounds and gravel walks are put in order.

L. B. Parsons.

FOREIGN AGRICULTURAL NEWS.

By the Steam Packet Acadia, which left Liverpool on the 5th February, we are in receipt of news from Europe up to this date; but our summary will be somewhat meagre compared with that of last month, as most of our journals are left in Boston to come on in case, instead of being sent by express, and we cannot detain the press for them.

Markets.—*Cotton* had arrived in such large quantities, and the last year's crop was talked of as being so large, that it has had the effect of lowering the price, and we regret to see that this great staple has fallen from a ¼ to ½*d.* since our last advices. We suspect that the quantity exported from this country has been somewhat overrated by foreign purchasers, and we hope before the whole crop gets to market, that there may be a slight reaction.—*Rice* has fallen a trifle.—*Tobacco* remains without change, though of rather slow sale.—*Flour* is dull.—*Provisions* generally the same, except dry hams, which are selling fairly.—*The first Beef* packed in the United States to suit the English market, was landed in London on the 1st of February. It seems to be well liked, especially some extra Mess for family use, shipped from this city. The bad qualities of Beef and Pork exported from this country to England last year, greatly prejudiced the dealers against American provisions, and we must expect some little time to pass yet before this will wear away. We can only overcome it by continuing to send *superior* qualities of provisions hereafter to market, and especially in having them put up to suit European tastes.

Money still continues very abundant, and first rate bills are discounted as low as 1½ to 2 per cent.

Corn Laws.—Sir Robert Peel declares that he shall oppose all further change in the Corn Laws at present.

Cotton in India.—From all the accounts we can gather, we infer that the climate is so uncertain that cotton cannot be produced in India as cheaply as in America, notwithstanding the low price there of labor and land. Our Cotton planters have not so much to fear therefore from this quarter, as they anticipated a year since.

Cultivating Truffles.—A French paper says, that truffles can be cultivated as easily as any other vegetable, as it has been found that they grow near or under the shade of a peculiar species of oak. A farmer at Dordogne sold 100,000 francs worth (nearly $10,000) last year, and expects the coming season to dispose of twice this amount.

From the London New Farmers' Journal we condense some items:

Epidemic among Stock.—This has again broke out in the midland grazing districts of England, although not with the same virulence as when it appeared three years since.

Fatting Sheep.—An experiment was made at Shrewsbury in fatting three sheep on peas, allowing them at the same time to run in pasture. They gained 39 lbs. in 21 days, an average of nearly 10 oz. each per day, which we think extraordinary.

Tan as Manure.—This is found to answer an excellent purpose in improving the sheep pastures on the downs.

Great Weight of Twin Steers.—A pair of these were killed by Mr. Dawson, of Rutland, at two years and five months old, which weighed 1,788 lbs.

Lime-water to kill Worms.—To six quarts of water, add half a pound of caustic lime, and after letting it stand a few minutes, commence watering the ground infested by worms, and they will soon be seen rising to the surface writhing about, and will die in a few minutes, especially if a little more of the lime-water is then sprinkled upon them.

The number of Cattle in Great Britain and Ireland, is estimated at 7,000,000, that of sheep 32,000,000, the total value of which at present prices there, is 110,000,000*l.*

Agricultural Chemistry.—Dr. Tilley is at work upon a new treatise on Agricultural Chemistry for Practical purposes, including the best methods of feeding stock and fattening cattle. He intimates that this work will be unincumbered by scientific terms, but how that can be and clearly express his ideas, we are at a total loss to divine.

Marine Shell sand for Manure.—In a paper read before the Highland Agricultural Society, by F. W. Clark, he proves by experiment, that marine shell sand is a good fertilizer as a top dressing for old pastures.

and he is now using 300 tons annually on one farm alone. He also uses it in compost and stable manure, and mixed with sea-weed, and finds that it brings in clover and other valuable herbage before unknown upon his land. We hope some of our sea coast farmers will take a hint from this experiment, and try the effect of shell sand on the Atlantic borders. Mr. Clark also finds by planting potatoes whole instead of cuttings, is a remedy against the seed becoming diseased. We should like to know whether this has any effect upon the curl in potatoes.

Excretions of Plants.—From an Essay on the Radical Excretions of Plants, by A. Gyde, he infers from a series of experiments :—

1. That most plants impart to water certain soluble substances or excretions.
2. That this is identical with the sap of the plants.
3. That plants have no power of selection, but take into their texture any solution offered to their roots, and that they have little or no power of again excreting it.
4. That plants watered with excretion receive no injury from it.

Monument to the Earl of Leicester.—Nearly 5000*l.* have already been subscribed towards erecting a monument to the late Earl of Leicester, as a testimony of his worth and the improvements made by him in agriculture.

Dead weight of Stock at Smithfield.—The dead weight of the largest prize ox exhibited at the late Smithfield Show, was 2,117 lbs. He was a Short-horn, and only 4 years 10 months old. The largest Long-woolled sheep weighed 204 lbs., at 1 year 8 month sold. The largest South-down, at 2 years 8 mos. old, weighed 165 lbs., others 1 year 8 months old, weighed 133 lbs. With pigs the largest was 236 lbs., at 32 weeks old.

The London Farmers' Magazine for February is embellished by a portrait of one of the old Long-Horned bulls—a pretty good animal—and a party of Sportsmen on horseback leaping a high fence. This last is called "Getting into Difficulty," and is graphically done.

Sheep Stock.—After discussing the management of sheep at the Framingham Farmers' Club, it was resolved that they should have free access to either rock or common salt—that nothing is preferable to common hurdles for folding them in fields—that pasturing old clover leys with them, destroys many of the slugs and wire worms, and that their feeding the young wheat in the spring is beneficial.

Recipe for the Hoven in Cattle.—The Hadleigh Farmers' Club recommends the following recipe for blown or hoven cattle : 1 lb. glauber salts, ¾ lb. of treacle, and 1 oz. of ginger mixed with one pint and a half of warm water. Powerful stimulants, such as ammonia, are also recommended.

Scours in Sheep.—In case of their being thus attacked, a small dose of castor oil should be given to remove any offending matter from the bowels, after which four grains of opium and 1 oz. of chalk, and then put them upon dry food.

The Veterinarian for February is full of able articles, but we dare not enter even upon a synopsis of them. If the public would countenance us in issuing a Three Dollar Magazine, to contain reprints and translations, accompanied with numerous engravings from European periodicals, we would give them such an interesting and valuable work as they have but a faint idea of.

Agricultural Improvement in Ireland.—The Marquis of Waterford having about 40,000 acres of land in the County of Derry, with 800 tennats upon it, has commenced a thorough course of draining on the Deanston system, by which it is supposed that the crops hereafter will be at least doubled.

In the *Gardeners' Magazine* for February, we find that charcoal as a manure is coming into pretty general use. It proves very beneficial wherever applied.

May's Red Victoria Currant.—The berries of this magnificent currant are said to measure not unfrequently 1½ inches in circumference, and the bunches 6 inches in length. The fruit is a beautiful scarlet, and the flavor excellent. The foliage is thicker than the common red currant and hangs on later, and of course assists in prolonging the fruit.

Hubshee Grape.—This has lately been introduced into Europe from India, and is nearly 3 inches in circumference and 1¾ inches long.

Talavera Wheat produced in the Isle of Jersey last year, at the rate of 66½ bushels to the acre. It was sown in drills 14 inches apart after a crop of potatoes, and cultivated in the best manner.

Pomerænia Cabbage is highly spoken of as being the best autumnal kind.

Sulphate of Ammonia is much used now as a top-dressing on grass, wheat, and other grain.

Paxton's Magazine of Botany for February, presents its flowers lithographed upon a *new* system. They are the Comparettia rosea, Scyphanthus elegans, Columnea splendens, and Paulowina Imperialis, colored after nature, and are certainly superior in delicacy, truth, and finish, to anything we have ever before seen in works of this kind.

WHEAT SHEAF FARM ON STATEN ISLAND, FOR SALE.

A recent domestic bereavement has induced the Undersigned, to offer his residence on Staten Island, for sale. It is situated midway of the outer bay, on the sea shore, eight miles from the Quarantine Ferry, three from that of Rossville, and equi-distant from two others, Seguine's Landing and Port Richmond.

The condition of the Farm—the extent, value, and practical usefulness of the improvements, and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upwards each, including, an appropriate allotment of woodland—each division offering a moderately elevated building location. The condition of the soil is well known to be in the best working order.

Terms to suit the Purchaser, as the object is merely to change the investment for another susceptible of equal product.

W. A. SEELY,
New York, Feb. 16th, 1843. 218, Fulton-street.

ORCHARD GRASS SEED FOR SALE.

The Subscriber offers for sale Seed of the best quality of the above valuable variety of Grass, at $2 per bushel. Apply at the Office of this paper, or to ROBERT WHITE, JR.
Shrewsbury, New Jersey, Feb., 1843.

COMMERCIAL GARDEN & NURSERY OF
Fruit and Forest Trees,
ORNAMENTAL SHRUBS, DAHLIAS, BULBS, &c.
FLUSHING L. I., NEAR NEW YORK.
Flushing, 3 mo. 26 1843. PARSONS & CO.

SHEEP FARM FOR SALE.

The Subscribers offer for sale, or to let, their extensive Sheep Farm, situated in La Salle County, State of Illinois. The Farm consists of upwards of 1500 acres, over 400 being enclosed by substantial picket fence, and improved; the balance dry rolling prairie and timber, most admirably adapted to sheep husbandry, for which purpose it has been used by the Subscribers for the last two years successfully.

The Flocks of Sheep can be sold at the same time, if purchasers are inclined. They consist of over 1500 good strong healthy white-faced Cheviot breed; also Three Fine Paular Merino Bucks, purchased of a celebrated Breeder at the East.

If the Farm cannot be sold for cash, offers will be received for renting the same for two or three years. Apply either to JOHN ROSE, Little Vermilion, La Salle, MURRAY & WARD, Chicago, Ill., or JAMES MURRAY & Co., Buffalo, New York, either of whom will give every information wanted.

REVIEW OF THE MARKET.

Prices Current in New-York, March 25, 1843.

ASHES, Pots, per 100 lb.	$5 50	to	—
Pearls, do.	6 56	..	—
BEESWAX, Yellow, per lb.	29	..	29½
COTTON, Louisiana, do.	5	..	9
Upland, do.	4¾	..	8
Florida, do.	4¾	..	8
Alabama, do.	5	..	9
FEATHERS, American, live, per lb.	20	..	25
FLAX, American, per lb.	7	..	7½
FLOUR, Northern and Western, via Erie Canal, per bbl.	4 75	..	——
do. via N. Orleans,	4 12	..	4 50
Southern, per bbl.	4 12	..	4 25
RYE, per bbl.	3 00	..	3 25
MEAL, Corn, per bbl.	2 50	..	2 75
do. per hhd.	12 25	..	13 00
WHEAT, Western, per bushel,	80	..	87
Southern, do.	70	..	80
RYE, Northern, per bushel,	54	..	56
CORN, do. do.	50	..	—
Southern, do.	48	..	50
BARLEY, per bushel,	48	..	50
OATS, Northern, per bushel,	31	..	32
Southern, do.	23	..	24
PEAS, Field, do.	86	..	1 15
BEANS, White, per bushel,	1 21	..	1 43
CLOVER SEED, per lb.	5½	..	6
TIMOTHY SEED, per tierce of 7 bu.	14 00	..	——
FLAX SEED, rough, do. do.	8 50	..	9 00
clean, do. do.	9 25	..	---
RICE, per 100 lb.	2 00	..	2 75
HEMP, Russia, per ton,	200 00		——
American, water rotted do.	——	..	—
HOPS, first sort, per lb.	9	..	11
LEAD, Pig, per lb.	3¼	..	3⅜
Sheet and Bar, per lb.	4½	..	5
OIL, Linseed, American, per gal.	85	..	90
PLASTER OF PARIS, first quality, per ton,	2 25	..	2 75
unground do.	1 81	..	1 88
BEEF Mess, per bbl.	6 50	..	7 00
Prime, do.	3 75	..	4 25
Cargo, do.	1 75	..	2 00
PORK, Mess, do.	7 50	..	9 50
Prime, do.	5 00	..	6 50
LARD, per lb.	6	..	—
BUTTER, best Table, per lb.	13	..	15
Western, good, per lb.	10	..	13
Shipping, do.	6	..	8
CHEESE, in boxes and casks, per lb.	5	..	6½
HAMS, Smoked, per lb.	7	..	9
Pickled, do.	5½	..	5¾
Shoulders, smoked.	--	..	--
BEEF, Smoked, do.	6	..	7½
SALT, Liverpool, ground, sack	---	..	1 47
do. fine, do.	1 50	..	——
SUGAR, New Orleans, per lb.	3	..	5½
TOBACCO, Virginia, do.	3	..	5
Kentucky, do.	2½	..	5
TALLOW, American, do.	7½	..	7¾
WOOL, American Saxony fleece, per lb.	32	..	37½
Full blood Merino do. do.	28	..	30
Half to three-fourths do. do.	24	..	26
Native to half do. do.	18	..	22
SHEEP PELTS, each,	---	..	—
HAY, per 100lb.	60	..	65
POTATOES, new, per bushel,	25	..	---
EGGS, per 100,	1 00		—

REMARKS.—There is no change at the Bull's Head worth noting. Cotton, from the late unfavorable news from Europe, fell in some instances last week full ¾ of a cent per pound. It has slightly recovered now, and the average depression from our last month's quotations may be stated at ⅜ to ⅝. Flour by canal has risen, more we suspect, from the short supply on hand here, than from any other cause. Southern Flour remains about the same. No wheat afloat, and quotations therefore nominal. Provisions are firmer, and but little choice Mess BEEF in market.

MONEY continues more and more abundant, and Specie still flowing in upon us. The Banks are seeking investments, and the best paper at short sight, is done readily at 4½ to 5 per cent. On bond and mortgage and long investments, 7 per cent is still obtained. Good Stocks are advancing steadily—United States is 3 per cent above par—New York six per cents the same. About One Million in Stocks, was sold the past week in Wall Street, a greater amount than during any one week for the five preceding years.

ACKNOWLEDGEMENTS.—To J. B. Dill, Esq. and the Author, for Mr. H. S. Randall's Address before the Cayuga Co. Ag. Society—Henry Coleman, Prest. Monroe Co. Ag. Soc., for his address, one of the most beautiful productions we ever read.—Wm. P. Van Rensselaer, for address before the Rensselaer Co. Ag. Soc.—Hon. H. L. Ellsworth, of the Patent Office, for his very valuable Report.—From all the above we had marked extracts, which for want of room are deferred for April No.—To Henry Watson for a copy of Transactions of Hartford Co. Ag. Society.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing Thirty-two pages, Royal Octavo.

New Terms—One Dollar a Year in advance—Single numbers Ten Cents—Three copies for Two Dollars—Eight copies for Five Dollars.

EDITORS of Newspapers noticing the numbers of this work Monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Each number of the Agriculturist contains but One Sheet, subject to Newspaper Postage only, which is *One Cent* in the State, or within 100 miles of its Publication, and *One and a-half Cents*, if over 100 miles without the State.

Advertisements will be inserted at One Dollar, if not exceeding Twelve lines, and in the same proportion if exceeding that number.

☞ REMIT through Post Masters as the Law allows.

PRINCE'S LINNÆAN GARDEN AND NURSERIES,
Flushing, near New York.

The following new Catalogues, 32d edition, of this immense collection of Trees, Plants, &c. will be sent to every post-paid application, and orders will be executed with despatch.

1. Fruit and Ornamental Trees and Plants.
2. Bulbous Flowers and Splendid Dahlias.
3. Green-house Trees and Plants.
4. Garden & Agricultural Seeds, with low wholesale prices.
5. Wholesale Catalogue for Nurseries, comprising Trees of smaller size.

Feb. 28th, 1843. WM. R PRINCE & CO.

N. B. 150,000 Mulberry Trees, 4 to 6 feet high, of the finest varieties, for sale at low prices and liberal terms.

CONTENTS OF THIS NUMBER.

Editorial.

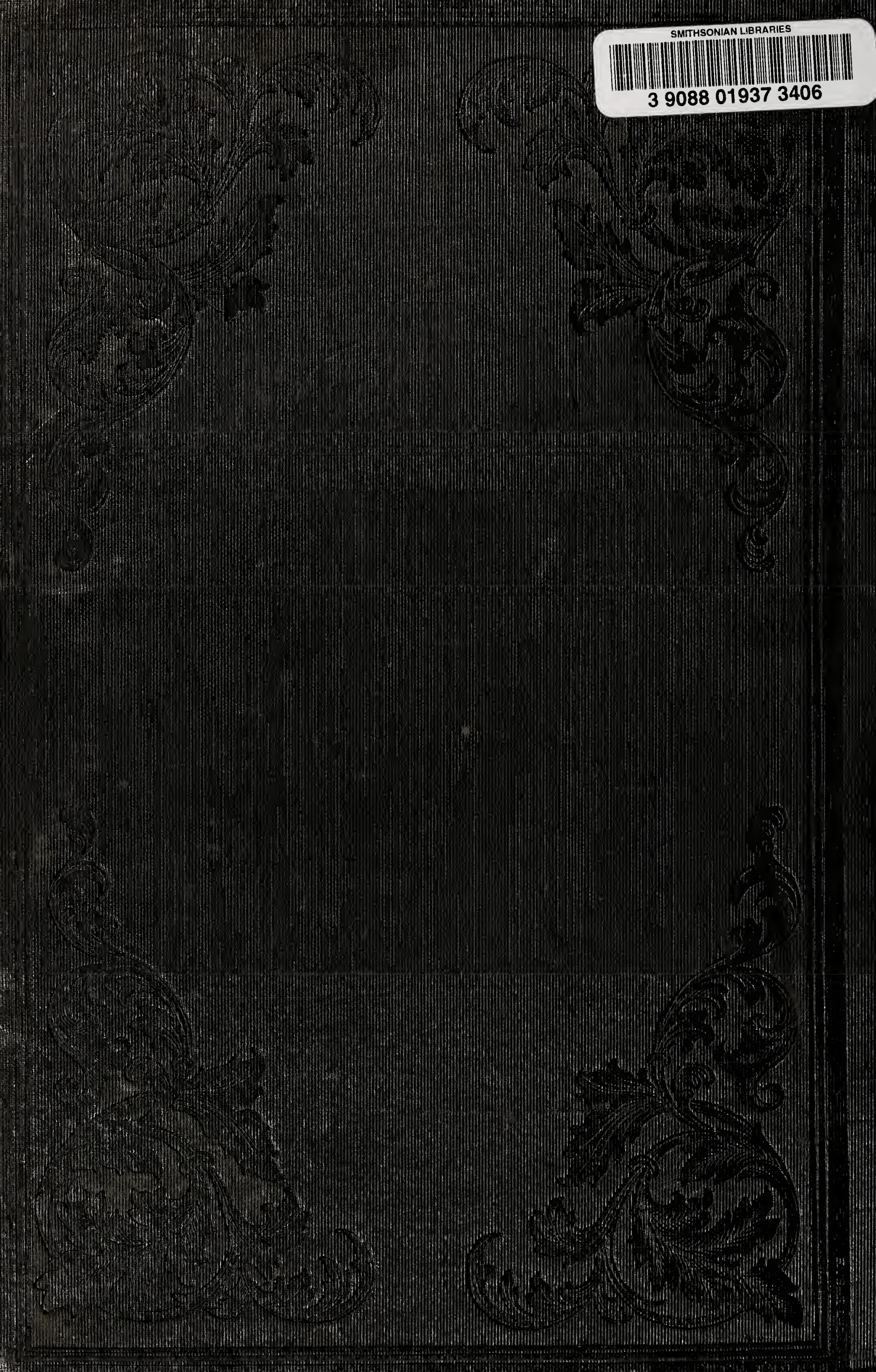
To our Readers 353
To Subscribers, ... 354
Hemp in Russia
Hemp and Cordage Imported for Five Years
Ornamental Shade Trees
Pine Boughs Healthy for Sheep, ... 356
Tour in England, No. 11,
Sheep Healthful to Other Stock, ... 358
English Tariff on American Provisions, ... 359
Result of Breed in Swine,
December Notes from Buffalo to New York, ... 360
Silk in our State Prisons 361
To Prevent Mice, &c. injuring Trees in Winter, 362
Management of Calves,
Farmers should never be in Debt,
Save your Deer Bones, ... 363
Improved Culture of Cotton,
Editor's Table—Notices of the Press 365
Mr. Coleman's European Agricultural Tour & Survey 366
Agricultural Societies, ... 367
Rural Architecture,
Foreign Agricultural News, ... 382

Original Correspondence.

Report of the N. Y. State Agricultural Society Com. on Cattle 364
E. Cornell, Sub-soil Plows, Barnaby & Mooer's Side Hill Plow 369
The Inventor, Cone's Dynamometer 371
Americus, Sheep Husbandry, ... 372
W., Lucern for Soiling—Sugar Beet, 374
L. F. Allen, Tour from New York to Mount Vernon,
Jno. J. McCaughan, Southern Products, ... 376
Solon Robnson, Dinner of the N. Y. S. Ag. Society, 377
L. B. Parsons, Horticultural Calendar for March, ... 382

Selections.

Lime Kilns, ... 378
Management of the Dung Heap, ... 379
Portable Manures, Potash as Manure for Wheat, ... 380
To Preserve Sheep from the Gad Fly, ... 381
The Lead Trade,
Rambouiliet Wool 382



SMITHSONIAN LIBRARIES
3 9088 01937 3406